A few Hints for Beginners.

ONE of the most fruitful sources of disappointment to the tyro in gardening, is the injudicious choice of material, or, in other words, the selection of objects for cultivation not adapted to his experience or his circumstances. Mr. A, for instance, by reading, or perhaps by the example of some neighbor, all at once conceives a desire to have a fine garden. He procures the nurserymen's catalogues, or some books, and placing entire confidence in the descriptions which he finds accompanying the names of fruits, ornamental trees, shrubs, and flowers, selects the newest, and, as he supposes, the *best*. These he *must* have, because he does not wish to be second to any in either the beauty or novelty of the objects on which he is about to lavish his care. Unfortunately for him, however, the stock of new and rare fruit trees, plants, and flowers, is small, and the specimens to be had rather feeble, and requiring great care and skill to bring them to a successful issue. His limited experience, as well as his impatience, prevents him from giving them the needful treatment, and they become a total failure. This cools the ardor of the beginner; visions of fruitful and blooming gardens, on which he had feasted his imagination, become misty; he hesitates, falls back into indifference, and finally and perhaps forever abandons the delightful scheme of gardening in which he had embarked so hopefully and zealously a few months ago. This is a very great misfortune; not for him alone, and his family, who are thus to be deprived of some of the highest and purest pleasures of life — the enjoyment of a good garden, but for his neighbors and friends, who are deprived of the good example which his success would have given them; and for the country at large, because gardens are public preachers, inculcating industry, refinement, and other personal and social virtues, upon which the comfort and happiness of society in a great measure depend. Now, in order to prevent in some small degree, if possible, the disastrous consequences of such failure, we propose to offer to beginners a few suggestions.

Gardening cannot be learned in a day, or a week, or a year. Men have to spend years in acquiring knowledge enough to make them competent to manage well even an ordinary garden. No man can be a good gardener without reading, and extensive reading, too; but no amount of reading can possibly, by itself, enable a man or woman to enter at once upon the management of a garden, and do it *successfully*. *Practice* is necessary — much practice, — and with it, careful study and observation. We may study in books the written history and character of any given tree or plant, until we suppose we know all that can be known about it, and yet when we undertake its cultivation we often find that our very first step was wrong. This every person of experience will testify to be true. The history of the introduction of every new plant and tree corroborates this. An accurate knowledge of the proper treatment has only been acquired by experience. "What, then, are we to do?" the uninitiated may ask. "Do you wish to discourage us?" "Must we go and serve an apprenticeship to some great master of the art and science of gardening, before we undertake to

plant and make fruitful and beautiful our humble half acre?" By no means do we wish to discourage you, or magnify the obstacles that lie in the way of your success. Neither do we ask you to serve an apprenticeship to any great master. What we wish to do, is merely to point out, according to the best of our humble judgment, the true path for beginners to pursue, if they would escape the rock on which so many hopes are shipwrecked.

We caution you against falling into the error which Mr. A committed, to wit, resolving to eclipse, in his first season, all that his neighbors had accomplished in years. This is a fatal sort of ambition, and one which we can not approve of, although we admire high aims in general. If you are totally destitute of experience, consult some friend or neighbor who is competent to advise you, and with his assistance lay some plan. Don't make a single move without some fixed plan; and let it be as simple as it possibly can be, so that a very moderate amount of skill, and care, and expense, can carry it out successfully. If your aim be to cultivate fruits, choose a small list of such as are noted in your district for their thorough adaptation to its soil, climate, &c. (Eschew *new* sorts, no matter how imposing the name or how tempting the description.) The management of these for a year or two, if you observe closely and avail yourself of all sources of information, will enlighten you greatly upon the culture of fruits in general; you will be able to appreciate what you have and what you need, and you may safely extend the field of your culture and experiment. To cultivate fruits successfully and pleasantly, one needs possess a great variety of information, both general and special: the nature of soils and manures, and their influence upon the various species of fruits; the nature and influence of stocks which are grafted or budded upon; the mode of growth and bearing of the various fruits. Then, especially, the kind of soil and degree of fertility required or best adapted to each; the hardiness, growth, and productiveness of varieties; the sort of pruning and training best adapted to them; and how and when to gather the fruit, and the best mode of ripening and preserving it. On all these points much may be gathered from books; but, after all, we must study our own trees, in our grounds, before we have knowledge applicable to our peculiar wants and circumstances. We know this by experience. What might be judicious and proper at Boston, would very likely require considerable modification to adapt it to Cincinnati or St. Louis; and even more than this, the same practice would not, in a multitude of cases, be applicable in adjoining gardens. By far the most intelligent and successful amateur fruit growers within our acquaintance are men who commenced with a few well-tested, easily-grown sorts, and added other and newer ones only as their knowledge of cultivation increased. Their whole practice has been successful, and encouraging to themselves and others.

In ornamental culture we would recommend precisely the same principles, and here indeed it is, if possible, more important than in fruit culture, inasmuch as the objects grown are more varied, and involve a greater variety of detail in their management.

It is a great mistake which many people seem to labor under, that to have a fine garden they must needs have a great variety of plants. We admit that variety is a desirable feature in the embellishment of a garden; but there can be, and there are,

fine gardens without a great variety. The largest collections of trees and plants fail to yield any satisfaction, unless they are well arranged, and in the most perfect health and vigor. But it is scarcely possible for persons who have just turned their attention to gardening for the first time in their lives, and who endeavor to dispense with the aid of a professional gardener, to arrange and cultivate a great variety of plants with any satisfactory degree of success. When they do attempt such an undertaking, as they very often do, unfortunately, their first year's experience is a sad chapter of failures and misfortunes. Their seeds fail to grow; their trees and shrubs die; nothing goes right; and the seedsman and nurseryman are charged not only with their own delinquencies, which are generally numerous enough, but they have to bear the *whole* blame. Bad management or unfavorable seasons are not taken into account, because the effects of neither one or the other are understood or appreciated.

We therefore urge upon beginners the propriety of exercising great caution in making their first selections. Every tree, shrub, and plant, should be perfectly hardy, and of the easiest cultivation. New and rare trees and plants are generally those most noticed in the periodicals, and beginners are too apt to think they must have these; but in this they are wrong. Inquire not for novelties, but for old and well-tried species and varieties that have been proved to succeed everywhere and with even indifferent treatment. These are what you need; and when you have attained complete success with them, and have become somewhat familiar with the nature of the different tribes of plants, and with the principles as well as details of culture, you may safely enlarge your collection.

Among the plants used in the decoration of gardens, there are a great many genera, species, and varieties; all of which require a special culture and treatment, and without which they will not succeed. For instance, among the popular families of garden plants, we have Roses of many distinct classes, Carnations, Phloxes, Pæonies, Hyacinths, Tulips, Lilies, and a multitude of other plants considered indispensable to a good garden. Now, if a beginner will at his first essay procure a collection of all these, nothing can be more certain than his failure and disappointment. Far better that he should commence with only one; and we will say Roses, for an example. But among Roses we have many classes, each requiring a treatment of its own; and in every class there are varieties known as vigorous growers, free bloomers, and of easy management in general, while others are notoriously uncertain. Now the beginner should confine himself entirely to such as are least difficult to manage. A fine display can be made with even two or three sorts of Roses grown in perfection. From among the classes known as summer Roses, including Hybrid China, Provence, Moss, &c., certain varieties may be selected that grow as freely as Willows, and that no one could fail with who would give them good soil, and cultivate them as well as they would a hill of potatoes. So among the popular class called Remontants, or Hybrid Perpetuals, there are vigorous growers, such as *La Reine*, *Baron Prevost*, &c., that may always be relied upon. We would plant entire beds of these reliable sorts, and have a magnificent show, rather than select a great variety, and have a rose-bed resemble a rose-hospital. The gardens we always derive most pleasure and instruction from, are

those in which a small number of plants or families of plants are well grown. Few amateurs become famous as cultivators, either in this or any other country, except those who confine their attention to a small number of objects. In Europe, we hear of one man famous for his Roses, another for his Pelargoniums, another for his Pansies, another for Tulips, &c., and people will travel hundreds of miles to witness the perfection to which each of these has attained in his special department. It is thus that all classes of plants have been improved and brought to their present state of perfection. Until amateurs in this country direct their attention more in this way to the culture of special objects, we shall not see very great improvement in any particular department, nor will we have many novel varieties of home origin. Professional cultivators, as well as amateurs, with us, aim generally at too much to do it well, or as it should be done. A nurseryman or florist of small means would, we think, do much better by confining his attention to some special culture, and make himself famous in it, rather than to dabble in all, and do none properly. In France there are Rose-growers who devote their whole attention to Roses; and purchasers in every part of the world look to them for supplies. Very large establishments only can with advantage embrace a general culture, because they can make each department a special one, and manage it as if it were a separate concern.

Gardening with us is but in its infancy. Every year thousands of persons are turning their attention to it for the first time, and without any guide or preparation. It is not surprising, therefore, that great errors are committed, and losses sustained. We think we have touched upon one of the most prevalent errors; and we would be glad to have a chapter on the subject from some of our amateur correspondents, who can write feelingly from experience. The season for bedding out summer-flowering plants in masses, according to the prevailing fashion of modern gardening, is at hand, and the suggestions we now offer may be entitled to some consideration in directing the choice of plants. Those who have little time to devote to the garden, will always find their pleasure and profit promoted by choosing not a great variety, but such things as are easily managed.

THE NEW CONIFERÆ.

BY HENRY W. SARGENT, WODENETHE, FISHKILL LANDING, N. Y.

Some three years since, I think, at the request of Mr. Downing, I sent him for publication in the *Horticulturist* some memoranda respecting the effect of our northern winters upon the new evergreens. It may not be unacceptable to such of your readers as are interested in this matter, to give them the result of my increased experience in the cultivation of these trees.

I would premise, in the first place, that the past winter has been a peculiarly trying one upon every species of tender or half-hardy plant. There have been great and frequent alternations of temperature, and the ground being often unprotected by snow, the

alternate freezing and thawing upon the surface has had an additional effect. Notwithstanding these disadvantages, my trees have gone through with the following success:

Abies Brunoniana—Tender.

Abies Smithiana—A good deal browned; most of the foliage has fallen, though the buds seem good. At Mr. Hogg's gardens, at Yorkville, this variety seems hardier than the Deodar.

Abies Douglasii—Uninjured; foliage quite green, and buds perfect.

Abies Menziesii—Hardy; untouched.

Abies Picea—Perfectly hardy.

Picea cephalonica, *Pinsapo*, and *Pindrow*—All perfectly hardy.

Picea Webbiana—Leader gone; otherwise uninjured.

Picea nobilis—Uninjured.

Picea pectinata pendula—Perfectly hardy, and promises to be very distinctive.

Picea Clanbrasiliana (Lord Clanbrasil's)—Hardy; but seems only a stunted variety of our native Double Spruce.

Picea Pichta, *Normandii*, *Frazerii*—Entirely hardy.

All the above varieties of the Silver Fir are very desirable, and I should say unquestionably hardy.

Pinus Pinaster, *Cembra*, *pumilis*, *Lambertiana*, *Gerardiana*, and *maritima*—All hardy.

Pinus excelsa—Hardy. This is beginning to be so well known, that it is hardly necessary perhaps to say anything in favor of its gracefulness and beauty.

Pinus ponderosa—Hardy. Grows with great rapidity, but resembles in foliage and habit the *Pinaster*.

Pinus Coulteri, *Devoniana*, and *macrocarpa*—These three promise to be among the most extraordinary of Pines. The foliage is six to eight inches long, of a peculiar green, and there is an exotic look about them that arrests attention. They have been entirely uninjured this winter, though their first year out.

Pinus Sabiniana—Hardy this winter, though previously it has suffered. A superb tree.

Pinus Hartwegii, *Montezumæ*, *patula macrocarpa*, *Laricio Calabria*—These four were planted so late last season, that I thought it more prudent to take them up. I am therefore unable to speak of their hardihood from my own experience. The former I have seen at Dropmore (Lady Granville's) ten to twelve feet high.

Juniperus tamariscifolia, *alpina*, *Hibernica*, *communis pendula*, *recurva*, *Bedfordiana*, *excelsa*, *fastigiata*—All hardy.

Torreya taxifolia—Hardy, and one of the most desirable of evergreens.

Cupressus macrocarpa—This seems to be very highly esteemed in England for its beauty, but it has not withstood our winter.

Cupressus pendula—One of the most beautiful of small trees. Hardy.

Cupressus horizontalis—Hardy.

Cupressus funebris—There still seems to be a question whether the so-called Funebral Cypress is not after all a *Juniperus*. My plants have for the first year or

so resembled Junipers; but as they get up, the character changes very much to a Cypress. I am not sure of the hardihood of this tree. My best specimen was killed last winter, though an inferior one is uninjured, except the tops a little brown.

Cedrus Libani—Perfectly hardy when well established.

Cedrus Deodara—A little tender the first or second winter; afterwards apparently uninjured by the severest cold.

Cryptomeria—My experience has been with this tree, that it suffers more from *over* than *under* protection. My best specimen, some twelve feet high, was destroyed during a mild winter from too much and too close covering, though it had gone through a much severer one with the slightest protection. I am quite satisfied that in my latitude they should be on the north side, and in the shadow of houses or woods, to be entirely successful.

Sabina communis and *variegata*—Both hardy.

Araucaria imbricata—This stands perfectly well with me on the north side of a wood, if planted on a mound, so that the water runs from the roots on every side, and in about two-thirds of Rockaway (white) sand to one-third leaf-mold.

Taxodium sempervirens—I have abandoned this as too rapid and succulent in its late growth for our climate. I think it would stand very well at Baltimore, and perhaps at Philadelphia.

Taxodium horizontalis—Hardy.

Cunninghamia glauca—Tender.

Cunninghamia sinensis—Quite hardy, and, from its resemblance to the *Araucaria*, a very desirable plant where the latter will not stand.

Taxus baccata (English Yew)—Hardy.

Taxus elegantissima—Hardy and very striking.

Taxus pendula—Hardy and desirable.

Taxus aurea—Hardy and curious.

Taxus adpressa—Doubtful.

Thuya filiformis, Chinensis, plicata, Tartarica—All beautiful and hardy.

Podocarpus lateralis—Killed.

Libocedrus Chiliensis—Killed.

Euonymus fimbriata—Killed.

There are two acquisitions to our evergreen shrubs which I desire to mention here as well worthy the attention of amateurs. They are, *Ilex latifolia* and *Ilex laurifolia*. It was the impression of Mr. Downing that the *laurifolia* was the only *Ilex* that would generally stand our climate. At his suggestion I imported some, and they prove entirely hardy. I can say the same, or nearly so, of the *latifolia*, which, having a leaf like a Camellia, only larger, will prove the greatest possible acquisition.

Among the Rhododendrons, Waterers' hybrid *catawbiensis* (100 plants of which, in forty odd varieties of bloom, he sells for £10,) are also great additions to our evergreen shrubs, being perfectly hardy, and blooming the year of importation. So also will be the eighteen varieties of Sikkim Rhododendrons, if they will stand our climate, an experiment I shall make another winter.

The *Andromeda floribunda* does very well with me, and has quite a pretty white flower.

The different Mahonias are too well known now to need further commendation.

Among the things I have imported this spring, with a view of acclimating, are *Garrya elliptica*, *Skimmia Japonica*, *Stauntonia latifolia*, *Cedrus Deodara viridis*, *Cryptomeria viridis*, *Cryptomeria nana*, *Berberris Darwinii*, *Fitzroya Patagonica*, and *Saxe Gothæa conspicua*. My success with these I may perhaps have the pleasure to communicate to you on some other occasion.

[This paper of Mr. SARGENT'S presents the results of the most extensive and carefully conducted experiment that has been made, to our knowledge, in America, in the cultivation of rare or recently introduced evergreen trees. With untiring zeal, and regardless of cost, he has for many years been collecting every new evergreen tree that has been announced as in any degree likely to endure this climate; and here we have a full account of his failures and success so far. To gentlemen improving their grounds or forming arboretums, to nurserymen, and in short to all who feel interested in arboriculture, the information is invaluable. The list we have here of those which have proved perfectly hardy, embracing as it does the greater number of the noble Pines and Firs of northwest America and the Himalaya, shows what ample resources we are to have in forming plantations both for utility and ornament.—ED.]

THE DAISY CHRYSANTHEMUMS.

BY W.

WHO has ever seen the beautiful Daisy Chrysanthemum, without admiring it, and desiring to add to his own collection a few plants so gemmed with bud and blossom in October, November, and December? We have few plants that bloom so well as the Chrysanthemum, and that can be so neglected for half of the year and suffer so little. The flowers appearing, too, just at the time when most needed to relieve the dreariness of those months so full of sad remains, of falling leaves and fading flowers.

Yet it requires some little experience to cultivate this beautiful plant, with entire success. In one book you will be told to "pinch out the tops to make them break," and in another to avoid the same thing from fear of preventing their blooming. Some recommend the "one shift system," and others to change them often from small pots to larger, as they increase in growth. It may be that in each of these different ways they have been cultivated so as to display much beauty, because they have been cultivated with care and attention. But I have a little "*experience*" to give, and hope that others, as well as myself, may derive some benefit from it.

Four years ago I began to cultivate the Chrysanthemum—the large or Indian variety. The first year, from eight or ten plants we had *one* beautiful flower. The second year we were quite well pleased with our success, having, perhaps, about twenty,

from five or six plants. The third year, (1852,) we added to our collection five or six of the Daisy or Pompone variety. The plants were plotted early in the season, and many of them repotted occasionally. From necessity they were placed with other plants in the shade of a large building, where they had the sun for a very short time in the morning, and for one or two hours in the evening. The plants seemed to grow finely, not losing their leaves, but retaining them to the rim of the pot, so large and green, they seemed to be very perfect as well as beautiful. But when the time came to look for flower buds there were but few to be seen. Still we hoped on until the 23d of November, when, from fifteen or twenty plants we had *fourteen* flowers in all, on *five* plants—one of them was a Daisy Chrysanthemum, with *three* flowers. There was after all quite a large number of buds, but they all, with those few exceptions, came to nothing more.

The fourth year, (1853,) it was determined to keep the plants *out of the shade.* Though other plants did finely, it was very evident it was no place for the Chrysanthemum. As our grounds were not inclosed sooner, we were unable to get them out until the 23d of May. They were taken from the house and planted in a warm, sunny exposure. Some shoots that had become quite long were layered, and soon striking made fine bushy plants. Other shoots were cut in pieces of about three inches, and the cuttings were planted in the open ground, (where they soon strike without the protection of a glass or shade, if the ground is kept moist). They were not potted until July, August and September, in the pots in which they were to bloom, with no drainage at all in the pots; kept in the shade for a day or two; they were again removed to a warm sunny spot, and the pots were placed on boards which rested on the ground. In September, October, and November, they were occasionally watered with a weak solution of sulphate of ammonia, (half an ounce in a gallon of water). The latter part of September, from fear of frost, they were removed to the house, and began to bloom about the 20th of October. Some might have been bloomed sooner, had they been placed in a warm room. But in November and December some of them were a mass of bloom, and they generally retained their foliage to the rim of the pot. One plant, "*Autumna*," about twelve or thirteen inches high, "according to measure," had ninety-five blossoms, besides which there were buds and imperfect flowers. The large varieties, as *Temple of Solomon*, *Jenny Lind*, *Fleur de Marie*, *La Reine d' Or*, &c., bloomed finely, also.

A few plants were left out for trial, and in a warm, dry place under the windows. *La Gitana*, *Poulidetto*, and *Sacramento*, bloomed about the middle of November. The climate is much colder than that of Rochester.

So much of "experience." Now permit me to give a little advice. If you would like to bloom them in the open ground, put them in a *dry, warm border*,—under your south windows would be a good place, if there are no trees in the way to hide them from the sun. Some of them bloomed earlier than others; for instance, *Sacramento*, *Autumna*, *La Gitana*, *Solfatare*, *Poulidetto*, &c., all pretty, and good bloomers, within doors or out.

If you would like to bloom them in your parlor or greenhouse, in May take strong

cuttings from those in the open ground, place them in the sunniest spot in your garden, where they can remain until August or September, allowing them, of course, plenty of room. In such a place the plant will break freely and have a fine, bushy top without pinching at all; and these plants will retain their lower leaves better on account of being in the open ground. Or, when your cutting begins to grow, you may cut it off within an inch of the ground, and it may become still more dwarf, and perhaps have a large number of flowers. Pot them in August or early in September, in good, rich mold; water once a week with manure water, or a solution of sulphate of ammonia. If they mildew, syringe them with sulphur water; or, if you have no syringe, just before a shower comes on, sprinkle them well with sulphur. Remove them to the house before there is danger of sharp frosts, but keep them out as long as you can, especially if they are intended for the parlor. After two or three hard frosts perhaps they might safely remain out for one or two weeks. After this, a south window in the parlor is probably the best place for them. In December or January, after the bloom is over, you can put your plants in a cold, frosty room; and if you want the pots, turn the plants out and place them close together, cutting off the tops, of course. Or, if you have the heart to do it, throw your plants away, and return to your garden in the following May for a fresh supply. In this way you have the plant in pot about three or four months, and that at the time when you think less of the trouble on account of the flourishing buds and beautiful blossoms.

[W. is an amateur cultivator who has been eminently successful. Whatever he says is entitled to the fullest confidence.—Ed.]

THE CULTURE OF SWEET POTATOES.

BY C. E. GOODRICH, UTICA, N. Y.

I have recently noticed frequent inquiries on the culture of the Sweet Potato. Having had some little experience in this branch of horticulture, I will briefly state the mode and the results.

Source of Seed.—This I always procure from the city of New York, to which it is, I suppose, in all cases brought from further south. I sometimes send directly there for it, and at other times procure it here from grocers who have recently procured it for retail here. Potatoes raised here are always too imperfectly mature to be preserved; they perish with a dry rot even when stored in small quantities, in dry sand, and in a cool and airy place.

Soil.—I have cultivated them in a light sand, a sandy loam, both of moderate fertility, and in moist rich sand. I prefer the former, because it secures a slower growth and results in the earlier formation of tubers, and of course in a more perfect maturity than either of the others.

Mode of growth.—The vine and leaf somewhat resemble a Bean trailing over the

ground. Perhaps it still more resembles wild Buckwheat, though its leaf is larger and a yellower green. The vines often make eight feet in length in a rich and moist soil, though usually four feet is as long as is desirable. In rich soil and moist weather they frequently throw down roots at intervals along the vines, which produce tubers at these points, and so fill the whole soil with tubers. This, however, is not desirable, as these scattering tubers are usually very imperfectly ripened. The tubers almost always stand up lengthwise in the soil, instead of lying horizontally, as in the case of the common Potato.

Preparatory Culture in the Hot-bed.—Having procured your seed tubers, bury them in an ordinary hot-bed, about the 20th of April in Central New York. Place them lengthwise, and nearly end to end, in rows across the bed, the rows about six inches apart, covering them about three inches deep with soil. In two or three weeks, according to the heat of the bed, each tuber will throw up from five to thirty sprouts close to the side of the parent. As soon as these are three or four inches high, take up the tuber carefully and break them off close to the parent, so as to save the side roots. The tubers may then be replaced for the production of a second and even a third crop of sprouts. Some prefer breaking them off in the ground, but I have always found it safe to take the tubers quite out of the ground for this purpose. This method of procuring plants is practiced even in the Southern States, since otherwise too many shoots would be produced. With us this mode becomes further indispensable as the only means of getting our plants sufficiently early.

Mode of Culture in the Field.—Plow your ground, and throw it into ridges five or six feet apart. This is needful—first, because your tubers, needing to spread sidewise, will form more readily than when penetrating deep into the soil; and secondly, they will thus be less likely to form roots along the vine. Set the plants on the ridge, about fifteen inches apart, inserting them in the soil just as though they were Tomato or Cabbage plants. Should the weather be hot, cover the newly set plants with any large leaves, as of Pie-plant, Balm of Gilead, &c. Hoe frequently until the vines cover the soil, but without increasing the height of the ridge. In wet and hot weather, it might be useful slightly to lift up the plants with a long, smooth pole, to prevent them from rooting.

I have not observed that the Sweet Potato is liable to disease, otherwise than, as a tropical plant, it fears cold and rainy alternations of weather.

Digging, Yield, Mode of Preserving, &c.—Dig as soon as the vines are killed by the frost. Spread the tubers thinly on a dry, cool floor, where they may often be preserved for gradual use until midwinter.

I am not prepared to speak very positively of the yield. Undoubtedly it will usually be less than that of ordinary Potatoes. In the hot, moist season of 1851, however, the yield was very large, and the whole cost of production not more than that of ordinary Potatoes by the bushel.

Quality.—Here, after all, is the failing point of this crop. In a dry, warm season, when grown in rather poor, sandy soil, they are often quite eatable, and are very acceptable to those not accustomed to those produced at the south. Often, however,

they are quite watery and stringy — so much so as to be utterly uneatable to all who have ever used a good article. For this reason I would not advise their culture as far north as Central New York; not at least until you strike the shores of the western lakes, where the summer is from two to four weeks longer, and allows the plant a proportionally longer period to mature its tubers.

I have written the preceding directions, not to encourage their culture, but to aid those who are determined to try that culture for themselves. Some of my directions will seem quite unnecessary to those familiar with their culture.

PROPAGATION OF TREES.

BY M. W. PHILIPS, EDWARDS, MISS.

I HAVE written nothing about Horticulture so long, that I feel almost ashamed to begin again. Yet I do not know but it is as well for me not to begin. For the past three or four years, I have been so much engaged in other fields of exertion that I have not read as much in either Horticulture or Agriculture as had been my custom for twenty years, and the little I have read, some four or five Agricultural papers, contains so much of new—to me—principle that I am behind the age. I am therefore fearful that I may run foul of some exploded doctrine; this, to me, would be awful, as I detest the cognomen of fogyism so much.

I have been trying two modes of grafting, which I see not laid down, by writers, and have so well succeeded that I wish to give it forth, and inquire of you what you think at least of the first, viz :—

Having been advised by two or three plain country folks, to try laying the entire scion in the earth, with the top end only out of ground, inserting grafts every eight to twelve inches, I tried a few Apples last year. I succeeded as well as with any mode of grafting I ever tried. The plan :—I took a long straight scion, say five to eight feet long, laid it upon a stout solid plank, and with a hammer and half-inch firmer chisel split through the stock about every ten inches, in which I inserted a graft already prepared, wedge-shaped, thrusting through the stock, then buried in the earth, leaving grafts and top end out of the earth. I had over five feet growth,—a bad year for growth, and in a situation shaded at least one-half the day. What I desire is, to know whether trees thus grown will probably do as well as others? I have seen objections made to root grafting, another favorite method of mine.

I am told that Peaches, grafted as above, do equally as well as Apples. I have tried a few Pears this year, for curiosity.

My second mode, and from whom I learned it, I now forget,—is, to cut scion and graft as for splice grafting, and split down on face of splice and make a tongue, cutting nothing out; and then thrust the grafts down so that the tongues enter each split. I have done thus upon grafts and stock nearly one-half inch in diamater. Upon small stock and grafts, I can prepare as many or more grafts as in wedge or cleft grafting,

and less labor to prepare the stock; as in heading down, the slope is made, and then a quarter or less split finishes. I then use grafting wax spread on cloth and torn into one-quarter to one-half inch strips. I think I can put as many in, this way, as any other plan I have tried. In the first mode, nothing is used around the graft, the roots putting out from graft as well as from stock. I presume it to be fully as good as layering.

I have used another mode somewhat between budding and grafting, on the Peach. Our seedlings bud out full two weeks, usually, before the improved northern varieties. When seedlings are about one-fourth to one-half inch in diamater, I head down with a short sloping cut; on the highest edge of the cut I split down the bark, say in March, when the leaves are half an inch or so long, bark slipping readily; then with my graft cut as for splice grafting, I thrust it down the stock and wrap with my waxed cloth. The trees are ready to transplant that fall and winter, often growing ten feet high, on rich land. I usually do this on the stock on which the bud inserted the fall before had failed, and thus fill up all vacancies. I do not know how the first and last will do for you, and only give them as what I have learned from home folks.

It may be that our climate is better suited, than yours, but it is certain that on favored soils, that we can grow many of our fruits from cuttings alone. I can show several, Peach, Plum, Apple, and Pear trees produced in this way. I give none of this as new; I never discovered any thing in my days; my talent lies more in imitation; invention is not for me. If this can avail aught towards good, I will be content.

P. S. Peaches have now (March 23d) done blooming, Pears in full bloom, Apricots and Cherries, also. Apples blooming, Cabbage Plants set out, Peas in bloom, Beets some two inches high, Radishes in plenty, Corn up, and some are planting Cotton. Turkies (wild) now gobling, tame are setting, Geese and Ducks setting, Chickens out by scores, and forward, Ducks hatched out. Fine Hyacinths about gone, Roses beginning, Spiræas gone, Evergreens, Spruces, Pines, Hemlock, Yew, Boxes, Euonymous, &c., growing, Horse Chesnut one foot growth. So much for lat. 32½. How of yours?

PRUNING AND MANAGEMENT OF THE PEACH TREE.*

169. Fifth Pruning.— *Sixth year of planting.* The operations of the fifth pruning are exactly the same as those of the fourth. The extremeties of the four branches A, B, C, D, are pruned to an equal length, and in proportion to their growth. We must carefully watch all the shoots on the upper sides of the branches, especially those on the two main branches, where the sap produces the strongest shoots, and which must be controlled; but the suppressions ought not to be too considerable, because the sap must be employed, lest its superabundance should cause disorder. We must endeavor to replace too vigorous shoots by the young ones that spring

* Continued from May number.

from their bases, or occasionally by a lateral; so that vegetation may still go on, but under circumstances that may admit of the growth being so regulated, by pinching, as to prevent over-luxuriance. Besides, much trouble may be avoided by lengthening the pruning, and restraining the vegetation, by nailing close to the wall.

170. At the time of the second disbudding, I choose, on the upper side of the main branch, three fruit-branches which have already received one or more prunings. The three branches should be at equal distances, of the thickness of a quill, and, respectively, originating lower down the main branch than where each of the lower secondary branches takes its rise.

From these three branches, which are intended to become the three upper secondary branches, E, E, E, I take off all the useless young shoots situated in front and behind; and I make choice of one for a leader which, without being too vigorous, appears well conditioned. I winter-prune it to a wood-bud, and nail it somewhat more upright than the other fruit-branches, and so close to the wall that its growth may be moderate, and any disposition to the contrary must be checked.

171. This preparation for establishing the three upper branches, E, E, E, is not made till the following year in trees which have made only weak shoots, and in those of which the lower branches do not appear sufficiently strong; but then the tree is not completely formed when eight years old.

172. Sixth Pruning.— *Seventh year of planting.* It will be perceived, by referring to fig. 11, that the main branch, A, bears three branches, E, E, E, on its upper side, which are much more developed than any of the other productions on that side. These three branches are the ones preserved at the disbudding of the preceding season, and which are now becoming the three upper secondary branches. If it was not possible to form these the preceding year (170, 171) they must now be originated.

173. The pruning of the fruit-branches, and successional shoots, and the treatment of the young ones, by disbudding and pinching, are still carried on. The same course is adopted with regard to the four branches, A, B, C, D, the extremities of which are shortened back at the winter-pruning.

174. With regard to the three branches, E, E, E, their leading shoots are pruned, for the first time, by shortening them to wood-buds, situated at heights proportionate to the respective conditions and state of growth of the shoots. If any of them have blossom-buds, the shoots must be pruned to a wood-bud above the blossom-buds; and care must be taken to disbud, as soon as they push, all wood-buds situated below the flowers, with the exception of one or two wood-buds that are nearest the base of the shoots. Immediately after pruning, the three secondary branches, E, E, E, are nailed obliquely, tightening the shreds more or less as is needful; and afterwards all the young shoots that are retained are nailed in the same way. During the growing season, the progress of the leading shoots is watched, and they are pinched when necessary. Their laterals are also pinched to six or eight leaves. In short the growth of the branches of this part of the tree and that of their shoots must be particularly attended to lest they impoverish those below; the upper young shoots must be nailed as soon as possible, in order to keep the sap in the lower parts. If, notwithstanding

these precautions, the leading shoot becomes too strong for the others, it must be cut on a lateral, situated in front, which must be immediately nailed in the proper direction, and close to the wall.

175. Seventh Pruning.—*Eighth year of planting.* This pruning is, in every respect, like the preceding. The main branch A (Fig. 11) is pruned for the seventh time; the branch B for the sixth; C for the fifth; and D for the fourth time. The secondary branches, E, E, E, are pruned for the second time since their formation was commenced, without counting the prunings on the fruit-branches from which they have originated. By designating all the principal branches by the letters of the alphabet, the whole course of proceeding can be seen at a glance, as the order of the alphabet also shows that of the formation of the branches. Thus, the letter A indicates the main branch that was first formed; whilst the three upper secondary branches are marked E, E, E, they being formed the last, and all three at one time.

176. The management of these three last-named branches is similar. They should always be nailed the first; and should be several times disbudded, and their shoots likewise pinched whenever it is necessary to do so. The essential point is to leave sufficient outlets for the sap, so that it may not open fresh ones by producing overluxuriant shoots and laterals, which would monopolize an undue share of nourishment and impoverish the lower branches of the tree. The suppressions on the upper branches are made with the intention of checking the sap, so that it may nourish the lower parts of the branches, which, notwithstanding, sometimes remain inactive. We should, however, recollect, that the vegetation of the Peach tree being incessant till the end of October, in ordinary years, it is always possible to remedy disorder by adopting proper means when it appears.

177. Eighth Pruning.—*Ninth year of planting.* Conducted during eight years in the way explained, and no accident happening to it, the Peach tree acquires at this pruning the form of a long and regular parallelogram. Fig. 11 represents the principal branches of a tree planted twelve years. The marks show the number of prunings which each branch has received; and the figures indicate the years in which the respective cuts opposite to them were made, reckoning from the second year of planting. Thus, the first cut on the branch E is marked 6, denoting that it was made in the year corresponding with that in which the main branch, A, received its sixth winter-pruning.

The tree covers a surface of about twenty-six feet in length and eight feet in height, and the extremities of the four branches, A, B, C, D, touch the same perpendicular line, whilst those of the three upper secondaries touch the same horizontal line as the extremity of the main branch, A. In other respects, the eighth pruning is the same as the seventh. The fourth upper secondary branch, being formed at a later period, does not exist at the eighth pruning.

178. The main branches are everywhere regularly furnished with fruit-branches. The tree, complete, as figured in my work, exists in my grounds; and it may be seen there, together with other thriving specimens which present the same regularity. Those Peach trees which were fully formed in 1841 are still as regular and vigorous

as ever, proving by their results that my method of square training is not only easy of execution, but durable in its effects. This is an advantage which those who treat on training do not always possess, and who would be greatly perplexed to show living examples of trees trained in accordance with their principles, although they may have had trees engraved as if such had been actually in existence.

179. During the ninth year from planting, the growth of shoots more or less vigorous, which will be developed on all the branches, must be watched, so as to modify and govern it according to the state of the tree, by means of pinching, disbudding, and nailing.

If, during the summer, any of the terminal shoots, E, E, E, grow too long, summer-pruning must be employed. The leader must be cut back on a lateral placed in front, and which is nailed in the best way to counteract its growth, and to keep these branches within their prescribed limits, as they are always more inclined than the others to grow too strong, owing to their almost vertical direction.

II. *The Pruning of the Peach tree in the Square Form after its formation is complete.*

180. Having explained the various annual operations by which the complete formation of the tree is effected at the eighth winter-pruning, it is now necessary to state by what means its regularity, as well as its productiveness, may be maintained, during the fifteen or twenty years which it may be expected to live.

181. At each year's winter-pruning, the branch that has borne fruit is cut off close to the one trained to replace it, and the latter is shortened to a wood-bud situated above several blossom-buds. Sometimes this successional fruit-branch is necessarily left much longer than we could wish, owing to the flower-buds being situated near the top of the shoot. This is frequently the case on the upper sides where the strongest shoots have more wood-buds at their bases; but it need not cause us any uneasiness, as we are sure of being able to remedy it at the following pruning, and we can, by leaving the shoot long, obtain one or two Peaches, of which we would otherwise have been deprived. Besides, the shoot may be pruned immediately above a flower-bud, as stated (96). By thus maintaining on the principal branches well-conditioned fruit-branches and young wood to replace them, it will be perceived that the sap is forced to distribute itself equally, and that it is prevented from running through all the sap-vessels of the principal branches so rapidly as only to leave badly-elaborated juices. During the existence of the tree, the pruning of the fruit-branches is always the same; and disbudding and pinching are the regulators by which we can conduct the development of these branches at will (87—96).

182. With regard to the principal branches, their pruning ought to be governed by two principles. The first is to encourage the prolongation of the branches A, B, C, D; the second, on the contrary, is to restrain as much as possible the growth of the extremeties E, E, E. These two opposite means mutually assist each other. In fact, it may easily be conceived that, in consequence of the elongation of the extremities

A, B, C, D, producing young shoots and leaves, these branches attract a greater quantity of sap than flows to the upper secondaries, checked as it is at the same time by obstacles opposed to the growth of the latter, and thus inducing its flow towards the extremities A, B, C, D, thereby contributing so much the more to their growth.

183. Therefore the four last are pruned as long as possible, in order that their points may regularly touch the perpendicular line drawn from the top of the wall to the earth. The only limit to this elongation is the height of the wall which prevents the branch A from attaining a greater length than that at which it touches the under side of the coping; and which, consequently, obliges us to keep the three secondary branches, B, C, D, in a relative proportion, so that their extremities, when nailed, may not extend beyond the perpendicular line falling from the point of the branch, A.

184. When it has reached the coping, there are three modes of proceeding. 1st, —By the annual cutting back of each of the four branches A, B, C, D, on shoots proper for replacing the extremities of the branches shortened back. These shoots are each pruned on a wood-bud suitable for a leader. This is the way generally adopted; and must necessarily be so when, as has been pointed out (59), the Peach trees are only twenty-six feet apart, and consequently there is no more space for the extension of the branches.

185. 2d,—By the annual cutting back of the branch A only, which must be treated from that time the same as will be directed at 187 for the branches E, E, E, and by the equal elongation of the branches B, C, D, until the branch D, in its turn, reach the coping. But, to employ this method, there must be certain conditions not always to be met with. It will be understood that the elongation of the lower branches is a secondary consideration to that of their being maintained in good condition; and that they should always be well furnished with young wood; for if they were prolonged without care being taken, it might prove injurious to the vigor of the lower part of the tree, and produce ugly gaps. Therefore, the elongation of the four branches A, B, C, D must be proportionate to their strength; and when they are weakly, they must be kept shorter, by every year cutting back their extremities to a lower shoot, which, with proper nailing, forms a new leader (184). This proceeding concentrates the sap for the better nourishment of the lower parts, and for the producing in them a more active state of growth. But if, on the other hand, the growth of the tree is so vigorous that the lower parts are healthy, and the principal branches there well furnished with fruit-branches, there is no danger in treating the branches A, B, C, D as has been explained in the beginning of this article, and thus we may even be able to give each wing an extent of twenty-feet—a proportion that cannot well be exceeded on walls ten feet high; and this does not prevent us from keeping the tree in the form of a long parallelogram forty feet in length by ten feet in height. But the second method, which can be very seldom resorted to, requires that a greater distance between the trees be provided for at the time of planting. It will be easily understood that the equilibrium of strength and growth is more difficult to maintain in a tree disposed in this way, the lower principal branches being only three against four upper ones; and, therefore, I do not recommend the adoption of this method.

186. 3d,—In carrying successively the depression of the main branch, A, to its utmost limit, its length relatively to the extremities of the three lower secondaries must, however, be maintained. This extreme lowering of the main branch, which thus ceases to divide the wing into two equal parts, still more increases the distance from each other of the upper branches, E, on each wing; and there would be a great space left between them if a fourth upper secondary (F,) were not formed.

It is obtained, as stated at 170, by the prolongation of a fruit-branch chosen at the base of each of the two innermost branches E.

This method is preferable to the second (185), but it should only be employed on trees that are very vigorous, especially in their lower parts; and in those in which a greater number of outlets for the sap can be afforded.

187. The pruning of the upper branches, E, E, E, consists in cutting each of them back every year, at the winter-pruning, on a fruit-branch, the shoot from the terminal bud of which replaces the extremity of the branch. This shoot is nailed as closely to the wall as possible, in order to restrain its growth. If this branch be shortened to a wood-bud, care must be taken to nail it as soon as it is sufficiently developed to admit of its being fastened. The extremities of the three upper branches should, after the winter-pruning, be at the distance of eight or ten inches from the coping.

188. Notwithstanding the constraint imposed on these upper extremities, they soon begin to grow rapidly; and we must take care, first to pinch them, afterwards to cut them down on the lowest lateral which the pinching produces; and, lastly, whenever one of them approaches too near the coping it is cut down at a summer-pruning on a lower shoot, or on a very slender branch of old wood, which is nailed in as soon as possible, and which becomes a new terminal. Attention to these shortenings is required during the time vegetation is going on; nevertheless if they prove ineffectual, and the branch gain the ascendant, it must be cut down at the following winter-pruning to a small fruit-branch, situated at its base (170), which is pruned and nailed as there directed. It is of course understood that disbudding and pinching are performed on the shoots of these upper branches, and that they should all be nailed as soon as it is possible to lay them in. They are pinched when necessary, and summer-pruning is employed for dispensing with the crowd of laterals which results from the pinching, cutting them off to the lowest lateral. All these precautions are necessary for producing and maintaining a supply of fruit-bearing branches on the three upper secondaries, E, E, E, of each wing.

The omission of these operations is often the cause of gaps in Peach trees. The treatment of the upper secondary branches is the same throughout the life of the tree. Lastly,—As repetitions must be made in order to draw the attention of the reader to the fundamental principles of the pruning of the Peach tree, I will conclude by stating that its success depends on the care of the cultivator:—

189. 1st,—To form well-nourished main branches, A, A, each tapering from its base to its top without inequalities even at the place where pruned. This result is obtained by training and nailing.

190. 2d,—To obtain lower secondary branches of a proper relative strength; and, like the main-branches, perfectly straight, and tapering, without swelling or knots.

191. 3d,—Not to form the upper secondary branches until the lower ones are so well established, that there may be no danger of their being impoverished by the upper secondaries depriving them of the necessary sap. Rather than run the risk of this, it is better to delay their formation for a year, or more.

192. 4th,—To take advantage of all the eyes, or young shoots, which grow on the upper or under sides of each branch, in order to furnish it properly with fruit-branches and successional shoots; and to destroy all the eyes which push in front of the branches as soon as they make their appearance, in order not to leave unsightly scars. Those produced at the back of the branch are likewise taken off, unless there is a vacancy to fill up, in which case they are preferable to those in front. The shoots resulting from these eyes must be nailed so as to bring them gradually to the side.

193. 5th,—Lastly, in order to insure these results, to make a proper use of the means, which are presented by disbudding; by pinching, which should not be too liberally applied; and by summer-pruning, so useful for concentrating the sap in the base of the successional shoot. Neither must we forget the importance of training the principal branches in a perfectly straight direction, this being favorable to the circulation of the sap; nor that of nailing, the effects of which have been treated on, according as it is loose, or otherwise, and whether it keep the branch in an easy or confined, a vertical or inclined position; the importance of shading the strong part to retard its growth; and that of budding and inarching when there is no more natural means of producing a shoot where it is wanted. In thus operating with care and intelligence we will generally obtain trees of regular form, having the bark of the principal branches fresh and nearly smooth, indicating perfect health. They will be well-furnished with fruit-branches at regular distances, and their crops will also be regular and abundant.

FRUIT CULTURE IN MASSACHUSETTS.*

A striking characteristic of the agriculture of the present time, as compared with that of a former period, is the much greater attention now paid to the cultivation of fruit. The early settlers made some attempts to introduce the best varieties of Apples and Pears known in the mother country when they left it. For this purpose, some brought with them the seeds of these fruits, but, to their astonishment, they found that the product of the trees which sprung from them was very different from what they expected, and in many instances inferior to the fruit from which the seed had been taken. They did not understand how this could be, as they did not know that the seedling is often inferior to the fruit whose seed is sown.†

* From the *First Annual Report of the Secretary of the Massachusetts Board of Agriculture.*

† The first fruit raised, was on Governor's Island, in the harbor of Boston, from which, on the 10th of October, 1639, ten fair Pippins were brought, "there being not one Apple nor Pear tree planted in any part of the country, but upon that island."

Their progress in this department, as might have been expected, was slow; indeed we can hardly say that fruit was cultivated at all as a part of the produce of the farm, and with a view to profit, till a comparatively recent date. Half a century ago it would have been impossible to find the number of varieties of good fruit in the whole State, which may now be found in a single town. There were orchards, it is true, and some of them were better than none; but this is all that can be said. Cider Apples occupied a very prominent place in the list. The *Hubbardston Nonesuch*, the *Minister*, the *Porter*, and other favorite varieties, had then no existence. Not a nursery containing trees for sale, was to be found in the State. Here and there was an instance of grafting, but it was rare, and generally no thought was given to the subject. It was regarded as absurd for any but a young man to set out trees. An incident in the life of the venerable Mr. Cobb, of Kingston, not inaptly illustrates the feeling which formerly prevailed to a great extent throughout the State. At the age of seventy years, he began the work ofdsetting an orchard. The idea was so ludicrous as to subject him to the ridicule of the neighborhood. He lived to the age of one hundred and seven, and died in 1801, having enjoyed many years the fruits of his labors. Grafted trees were now and then obtained from another State, where somewhat greater attention had been paid to raising them; and a few orchards, nearly fifty years old, now bear some good fruit, notwithstanding the neglect and abuse of subsequent owners.

In the cultivation of fruit on the farms of this State, with reference to profit, the few great staple varieties are mostly relied on, while the choicer and more delicate kinds, which require much time and care to bring them to perfection, are left, for the most part, to the horticulturist, who is fully able to supply the limited demand for them.

To make such fruits profitable to the farmer, he should deal directly with the consumer. As things are, the producer often gets less than his proportion of the price paid, while the consumer, on the other hand, frequently pays far more than he ought.

It is the more common varieties of fruit, therefore, (for which there is, and always will be, a good demand,) that are grown on the farm.

Fortunately, the habits and character of these varieties are now pretty well known, and the farmer can judge which of them it is most for his interest to grow. He knows for instance, that certain Apples, as the *Baldwin*, produce in alternate years, and then very abundantly; so much so, indeed, that the market is overstocked, and prices fall. The intelligent farmer would naturally make his calculations with reference to these facts, and avoid such casualties by selecting for his orchards such Apples as the *Hubbardston Nonesuch*, the *Minister*, or others of equal value, which will find a ready sale when the *Baldwin* and similar varieties are selling at the lowest prices.

The fact that these things sometimes occur, does not prove that fruit is not profitable, as is sometimes argued. If any one fails to make by it, he should rather consider it as an indication of some want of prudence or foresight on his part, and though he may not be willing to see or acknowledge it himself, it will still be evident to all who look on with a full knowledge of the fruit market.

To show how great attention is now devoted to this pleasant branch of rural economy, the following short extracts may be given.

An intelligent farmer of Franklin County, writes as follows:—"The cultivation of fruit is prospectively most important to the farmer's interest, and the farmers are just beginning to learn it; there is no other way by which land can be made so profitable as by raising fruit, and our land is well adapted to the cultivation."

The same may be said of some parts of the county of Worcester, where "fruit of all kinds has, within the last fifteen years, received great attention, and been attended with most beneficial results, yielding to the farmer the most net profit of anything that he could cultivate. Choice Apples are raised in great abundance—except this year, the new edition of worms has produced almost an entire failure."

Another from the same county, writes:—"Great attention has been paid to the cultivation of fruit, particularly the Apple, within the last few years. The soil is peculiarly adapted to fruit of all kinds, it being a deep yellow loam, and the surface greatly diversified. Peaches are generally, and in some instances extensively cultivated Pear culture is receiving very much attention, and Quinces are raised, more or less, by every body. With many farmers the profits of the farm have doubled within the last ten years."

In the county of Middlessex, also, the farmers are paying greatly increased attention to this subject, and find it profitable to do so. A correspondent writes as follows:—"Considerable attention is given to the cultivation of fruit. There are some valuable old orchards, producing the *Baldwin* and *Hunt Russet* in abundance. Great numbers of young Apple trees have been set within the last six years, and are receiving excellent care by careful pruning and the constant cultivation of the ground. Garden fruits, such as Peaches, Pears, Plums, Currants, Gooseberries, Blackberries and Raspberries have also recently received a degree of attention unknown here, until within a few years. There is no doubt among our cultivators but that these fruits materially increase the profits of the farm."

From another town of the same county, the following return was made, showing also the great attention which this subject is receiving:—

"More attention is paid to fruit culture, than any other branch of agriculture, and with great success—especially Peaches, which thrive exceedingly well here; about 5,000 bushels were raised the past season. Apples, and other fruits do well. It is generally considered, that fruit trees pay for themselves, including care, cost of trees, &c., in about twelve years; and I think a great part of the time bestowed on an orchard is clear gain. All should plant an orchard who have land; I can assure them more profit thereby, than from any other branch of agriculture."

In the county of Hampden, though less interest is felt in fruit than in some other counties, it is now beginning to excite attention. One practical farmer writes from there, as follows:—"People have paid considerable attention to the cultivation of fruit, for a few years past, and I think with pretty good success. I have done as much in the way of raising fruit, as any man in our town, and I can say that I get more net profit from my fruit, considering the labor, than from any other products of my farm. We are seventy miles from Boston; we can pick our Apples one day, and have them in Boston market the next."

The county of Norfolk is peculiarly adapted to the raising of fruit, from the nature of its soil, its vicinity to the best of markets, and the facilities which it has for selecting the finest varieties. An intelligent, practical farmer, writes thus:—"Much attention is given to the cultivation of fruit. A good orchard of Apples, in full bearing, would probably increase the profits of a farm one-third; and where a variety of fruit is successfully cultivated, the increase of profits would be one-half, perhaps more."

Another in Middlessex County, says:—"Considerable attention has been paid to the cultivation of fruit, particularly Apples and Peaches. We send to the Boston and Lowell markets about six thousand bushels of Peaches, and, in bearing years, about six thousand barrels of Apples. We consider hay, fruit and wood, more profitable than anything we can raise."

In Essex County, fruit has received "much attention. The best kinds of Apples, Pears, Peaches, Plums, and Quinces, are raised in abundance."

In this county, the cultivation of fruit is of early date. The oldest Pear tree in the State still stands a constant bearer, having been imported from England by the celebrated Governor ENDICOTT. Importations were then very rare, most trees being propagated by the seed. This tree is now more than two hundred years old. It is a *Bon Chretien*, though of inferior quality. The exact date at which it was set out is not known. The grant of the land on which it stands, was made to Governor ENDICOTT n 1632; and, not many years after that, he had a nursery of young trees not far from the spot where this tree now stands. Some of these trees he is known to have sold to his neighbors, who generally paid in land, the price being sometimes, two acres a tree.

The *St. Michael's*, *St. Germain*, *Brown Beurre*, and some other fine foreign Pears were known and esteemed in this county many years ago. These varieties were probably far better when first introduced into this county, than they are at present. In new lands and mild climates, they are ordinarily better than in other soils and colder climates, where they are apt to be inferior.

PRACTICAL DIAGRAMS OF THE RULES FOR LAYING OUT GARDENS, FORMING CURVED LINES, &c.*

To form a volute where the border is of equal breadth.—The usual mode of forming a volute or spiral line is one of the simplest problems in geometry, and therefore requires no explanation here. The following method is, however, both original and better adapted for throwing up such a figure in groundwork. It is the invention of Mr. ALEXANDER FORSYTH, and was by him first described in *The Gardener's Magazine*, from which source our four following figures and descriptions are taken. "Make a circle around the center of your intended volute, as much in circumference as you intend the

* From MCINTOSH'S *Book of the Garden.*

breadth of your circuitous border to be; stick this circumferential line full of pegs, and tie one end of a garden line to one of them. Taking the other in your hand, go out to the point where you intend the volute to begin; and as you circumambulate, holding the line strained tight, you will delineate on the ground the annexed fig. 1.

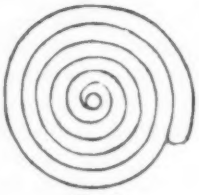


Fig. 1.

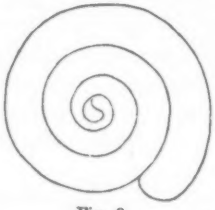


Fig. 2.

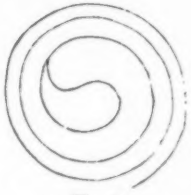


Fig. 3.

A volute where the border is intended to be gradually narrowed towards the center as in fig. 2, may be thus formed:—"Make a circle as before, and instead of driving the pegs upright, let them form a cone; or, instead of pegs, use a large flowerpot whelmed, and, if necessary, a smaller one whelmed over it. Measure the radius of your volute, and wind that complement of line round the cone in such a manner as to correspond with the varying breadth of your intended border, and commence making the figure at the interior by unwinding the line."

A volute, the border of which widens as it approaches the center, is produced upon the same principle as the last; only, as the figure is as it were reversed, unwind the line from the other end, and fig. 3 will be produced.

The following ingenious method of forming circles or other curvilinear lines, is the invention of Mr. Forsyth, and must be of great practical use to those who have the laying-out of grounds, particularly intricate figures in geometrical gardens. Suppose *a b c*, fig. 4, to be three points in the curve, taken at equal distances (say fifty links): placing the cross-staff at *b*, with one of the sights pointing to *a*, make *b o* perpendicular to *a b*, and measure its length. Then, removing the cross-staff to *c*, make *c o* perpendicular to *b c*, and equal to *b o;* and make the line *b o d* equal to *a o c*. Then *d* is a point in the curve; and in the same manner other points may be found successively.

Fig. 4.

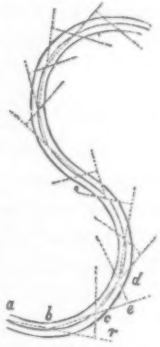


Fig. 5.

Fig. 5 differs from the above only in this, that the angles are taken outside. Set up three pegs, say fifty links apart, as before, and fix the cross-staff in *r*, with one sight on the line *r b a*, and the other pointing to *c*. Then measure *r b* and *r c*, and remove to the line *e c b;* draw *e e* equal to *r b*, and *e d* equal to *r c*, and so on. The same end may be obtained by a theodolite, or by any other instrument for taking angles; or even with three needles stuck in a board, form-

ing the requisite oblique angle. Setting the instrument in *b* fifty links from *a*, with one leg of the angle on the line *b a*, and by the other peg directing an assistant to place the peg *c* at the distance of fifty links; then remove to *c*, and so on.

To find the center of a circle, whose circumference will pass through three given points (not in a straight line), connect the three points *a b c* (fig. 6) together; from the middle of each, erect lines perpendicular to them, and where these perpendiculars cut each other is the center required.

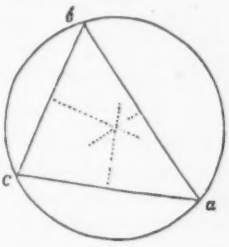


Fig. 6.

To find the center of a circle, connect three points in the circumference, and from the middle of the two lines erect perpendiculars. Where these intersect each other is the center required.

To construct a hexagon, divide the circle into three equal parts; from the middle of each line erect a perpendicular; and where these cut the circumference of the circle are the points where the sides of the hexagon meet.

To construct an octagon, divide the circle into four equal parts, by describing a square within it; erect perpendiculars from the middle of each side of the square; and where they intersect the circle are the points where the sides of the octagon meet.

To construct a pentagon, draw a line through the center of the circle, from the center of which erect a perpendicular, *c d*; divide the straight line from *c* to *b* into two equal parts; take *e d* as a radius, and describe a circle, making *e* the center, and when that circle cuts the straight line at *f* the distance from *f* to *d* is the length of the side of the pentagon.

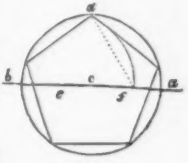


Fig. 7.

To describe a circle the center of which is occupied with a square, say the base of the pedestal of a statue, fountain, &c., tie a cord round the square, not over tight; to that attach a line, in length equal to the radius, minus half the size of the square base; with that line describe the circle. This is a plain working plan, and near enough for all practical purposes in laying out grounds. The same rule may be applied when the base is circular, or of any equal sided figure, a pentagon, hexagon, &c.

To describe a circle when the base of the fountain, statue, &c., is oblong, lay the oblong correctly down on paper; find its center by drawing two lines diagonally through it; from that describe a circle of any size; draw two lines across the circle parallel to the longest sides of the oblong figure; from these erect perpendiculars, at equal distances, and note their respective lengths; on the ground draw two lines parallel to the longest sides of the oblong; erect perpendiculars as before, and measure their lengths from the drawing, putting in a peg at the end of each, which will describe the circle required. A line applied as in the last example, will describe an elliptical figure.

To describe an oval whose length is given, divide the length into three equal parts; let the two inner points so found be the centers of two circles, which shall form

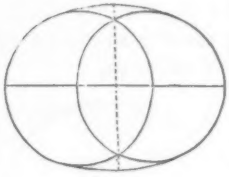


Fig. 8.

the ends of the oval; the intersecting points of these circles will be centers to the two segments required to complete the figure 8.

To describe an oval, when the length and breadth are both given, lay down the length and breadth perpendicular to each other; combine *a* and *d*; measure the distance from *c d*, on the line *a c* from *c*, which will give *c n*; measure the distance from *n a*, on the line *d a*, which will give *f*; divide *f a* into two equal parts, at the middle of which erect a perpendicular: where that perpendicular cuts the line *a b* will be the center *h*, for the end of the oval; and where it cuts the line *d i* at *g*, is the center for the side, (fig. 9.)

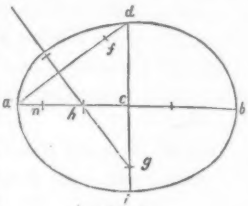


Fig. 9.

The gardener's oval, when both the length and breadth are given, is thus formed: Set off the length *a b*, and breadth *c d*, perpendicular to each other; take half the long diameter, and measure from *c*, to the line *a b*, with that length; when that line cuts the line *a b*, put in a peg; do the same on the other side, and the point *e* will be found; stick in there also a peg; then, with a cord passing round the pegs *i e* and *c*, with the addition of the space from *a* to *e*, describe the figure with the peg *c*. (Figure 10.)

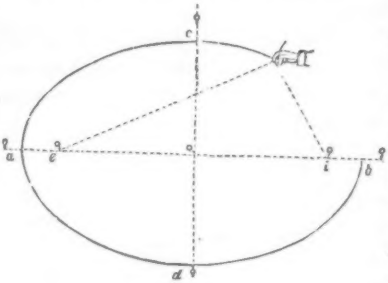


Fig. 10.

To form an egg-shaped figure (fig. 11), the line *a b* being given, divide it into two equal parts; from the point *c*, where these lines intersect each other, construct a circle with the radius *c a* or *c b*; draw the line *c d* perpendicular to *a b*; taking *a* and *b* as centers, describe two arcs; draw a line from *b* through *d*, till it cuts the arc at *f*; then, with *d f* as a radius, complete the figure.

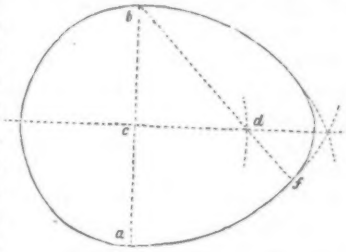


Fig. 11.

To set off a walk perpendicular to the line *c d*.—From the center *e* on the line *c d* set off *e g* and *e h*, at equal distances. From the points *h g* draw two arcs of different radii; if, where these arcs bisect each other, a line be drawn, it will be perpendicular to *c d*. By the same rule the center of a walk will be found perpendicular to the

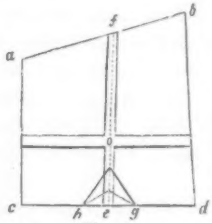


Fig. 12.

line *e f*, taking *o* as the center, fig. 12. To set off a walk perpendicular to the corner of a wall. — Carry out the lines *a* and *b* straight with the face of the wall, and of equal lengths; from the two ends of these lines, with equal radii, describe two arcs; from where they bisect each other, draw a line to the corner of the wall, which line will be the center of the walk, fig. 13.

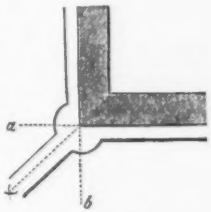


Fig. 13.

The annexed diagram, fig. 14, illustrates an instrument very useful in laying out mathematical figures. It consists of an upright pole two feet in length, shod with iron, upon which revolves a metallic tube with a projecting shoulder, to which is attached by a screw a wooden rod, eight, ten, or more feet in length, marked in feet and inches. Upon this rod there is a movable iron slide, with an iron sharp-pointed stud. The two-feet pole being placed in the center, or point from which the figure is to be described, the slide is moved along the rod to the proper distance, and fixed there by means of a screw. An iron handle, turned up at the end of the rod, about 18 inches in length, is taken hold of, and, as it is moved round, the iron stud in the horizontal rod describes the figure intended to be formed.

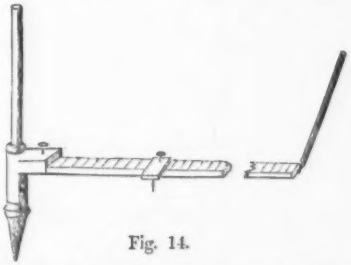


Fig. 14.

Another useful instrument is a pair of wooden compasses shod with iron, the legs of which are five feet in length. To one leg a quadrant bar of iron is attached, and made to pass through the other leg. This quadrant-shaped iron rod is perforated at every three inches, and furnished with a screw-pin to keep the legs of the instrument distended to the extent required. The quadrant rod is placed exactly in the middle of the leg of the instrument, so that when the leg is moved, for example, three inches on the quadrant, it gives six inches at the points of the compasses; if moved one foot on the quadrant, it gives two feet, and so on, being always double the former extent.

The following figs., 15 to 29, which sometimes occur in flower-gardens, are given, with their centers marked to facilitate their being laid down on the ground. They are from a German work entitled *Handbibliotheck für Gärtner*, by LIGILER of Berlin.

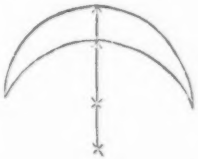


Fig. 15.

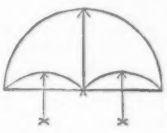


Fig. 16.

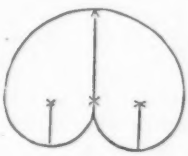


Fig. 17.

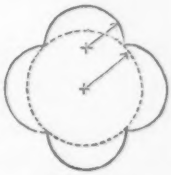


Fig. 18.

Fig. 19.

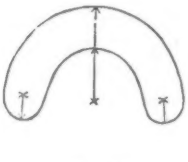


Fig. 20.

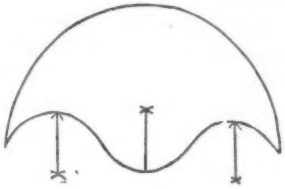


Fig. 21.

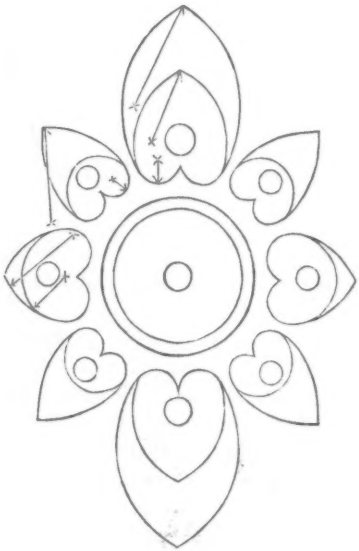


Fig. 22.

Fig. 24.

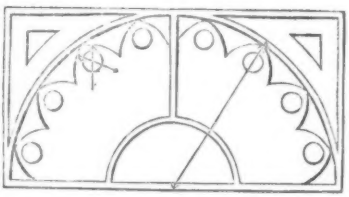


Fig. 23.

Fig. 25.

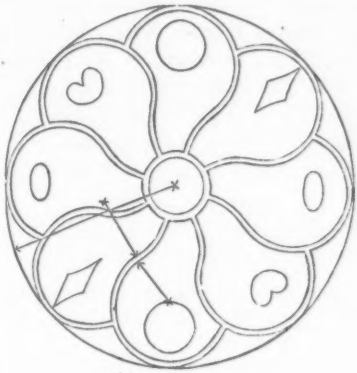


Fig. 26.

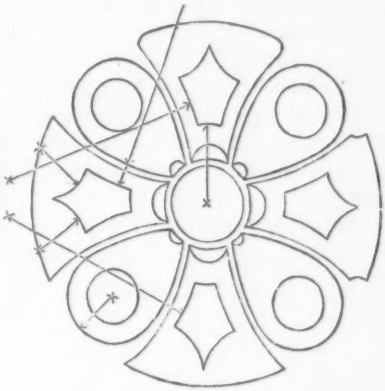


Fig. 27.

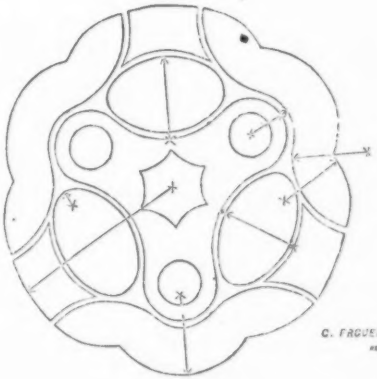


Fig. 28.

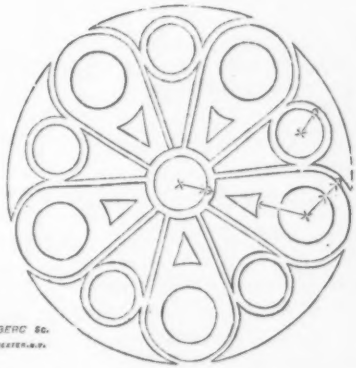


Fig. 29.

Rules for calculating the length of shadows. — In selecting situations for gardens' and also for planting trees for shelter, the length to which their shadows will reach during winter deserves consideration, as also does that of the shade caused by halls and other buildings; for no screen should be planted so close as to shade any part of the ground, nor any glass roof be erected on which the sun may not shine every day in the year.

Several rules are given for determining this. The relation between the height of a tree and the length of its shadow depends on the latitude of the place and the sun's declination, which latter will be found by consulting an almanack, and the former by the sun-dial—at least, most sun-dials have the latitude engraved on them; if not, the map of the county will give it. The height of the tree, wall, or building, and the length of its shadow on the ground, form the perpendicular and base of a right-angled

triangle, the hypothenuse of which angle is represented by that of the sun's rays from the top of the tree to the ground. This hypothenuse, or direction of the sun's rays at noon, always forms, with the ground line, an angle equal to the amount of the latitude and the sun's declination added together, from the 20th of March till the 22d of September; but from the 22d of September till the 20th of March, the sun's declination is to be subtracted from the amount of the latitude. This angle being found and the height of the wall, house, or tree taken, all the rest will be found by the rules of trigonometry.

The following simple rule may be of use to such as do not understand geometry or trigonometry, and will give the shadow near enough for practical purposes:—

Multiply the height of the wall, tree, or building—

In latitude	51½°	by 3.719.
....	52°	.. 3.852.
....	53°	.. 4.149.
....	54°	.. 4.402.
....	55°	.. 4.895.
....	56°	.. 5.369.
....	57°	.. 5.944.
....	58°	.. 6.651.

The product will give the length of the shadow at noon on the shortest day.

Example.—What will be the length of the shadow of a tree 10 feet high, in latitude 52° on the shortest day?

3.852 the multiplier for latitude 52°.
10 the height of the tree.

38.520
12

6.240
12

2.880 *Ans.* 38 feet, 6 inches, 2 parts.

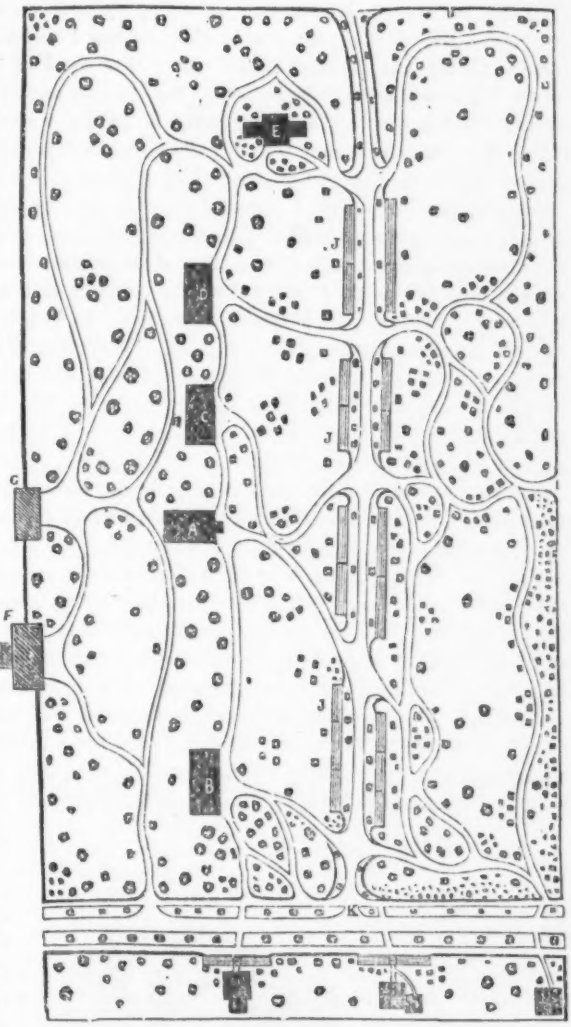
ORNAMENTAL GROUNDS AT HAMILTON COLLEGE.

BY THE CURATORS.

THE readers of the *Horticulturist* will remember that mention was made in this journal, a few months ago, of certain contemplated improvements in the grounds pertaining to Hamilton College, at Clinton, N. Y. Some progress has been made in this work, though it is far from being completed. Our time and labor, hitherto, have been expended chiefly in removing unsightly incumbrances, in grading and draining the soil, in planting hedges, and laying out roads and walks. This foundation-work being now finished, and something having been done in the way of planting trees and shrubs, we feel justified in making a brief report of our operations to those interested in such matters, and in presenting an engraved plan of our grounds. We do this by way of acknowledgement to those who have aided us in this enterprise, and in the hope of encouraging others who are engaged in similar labors.

Let us now turn to the annexed plan. We will suppose the reader to be, for the time, our visitor. On arriving at the middle entrance, K, on the south side of the Park, let us drive along the carriage-road a few rods distant from the front of the College buildings. This avenue, you will observe, is bordered on each side with a wire fence, and a hedge of Buckthorn. On the left, we have a near view of the South College, B; the Chapel, A; Middle College, C; North College, D; and the Astronomical

Observatory, E. If we stop at this last named edifice, and acsend the tower, we shall behold a landscape of great variety and beauty. Not far from the base of this building, the hill slopes gently down to the valley of the Oriskany. Yonder, several miles to the north, this valley unites with the Mohawk, from which you see the mist rising. Looking still further, in the same direction, among the blue hills near Rome, you discover a storm raging; while at the east, the Trenton hills, some twenty miles off, are bathed in sunshine. At the south and west, you see other hills and plains, not wanting in interest and beauty. Before leaving this fine post of observation, whether of the heavens above or the earth beneath, let us appoint another visit here, a year hence, when, the new telescope (the first large instrument of the kind ever made in this country,) being mounted, and a transit instrument and clock obtained, we shall be able to entertain you longer and better at this point in our grounds.



PLAN OF GROUNDS AT HAMILTON COLLEGE.

Passing now in a south-westerly course, in the rear of the Colleges, we come to the Gymnasium, G; and to the Mineralogical Cabinet, F; in each of which places we shall

doubtless find much to interest us. Returning by another road to the Observatory, we catch a glimpse of the mansion in which the late President Davis spent the evening of his life. At the north-eastern extremity of the Park we approach the brow of the hill on which the Colleges stand. The Oriskany creek sweeps around near the foot of this hill, now hidden among groups of trees, now sparkling in the sun, and filling the air with a pleasant murmur. Turning our steps southward, we will pause a short time at the College Cemetery, which we enter at I. This could not well be introduced into our published plan, and we will, therefore, only say of it here that both this and the avenue leading to it are planted with evergreens and various drooping trees appropriate to such places. Several monuments have already been erected over honored and precious dust, and we are confident that taste and affection will continue to render this spot increasingly beautiful. As we proceed again, in a southwesterly direction, we obtain, at one point, a broad view of Clinton, in the valley beneath us; at another, we see the spires and roofs of the village of Paris, on the summit of an opposite hill; and at another, we discern the city of Utica, nine miles distant. At several of these points commanding the finest prospects, rustic arbors, and seats, will soon be constructed.

Having now arrived at the main entrance, it will, perhaps, be our good fortune to meet some of the Professors, (a few of whose residences appear on the south side of our Plan,) and to receive under their roofs that hospitality which they know well how to dispense. Before parting, however, we beg to assure you that the work we have thus begun shall be completed. These grounds are not, indeed, of vast extent; we have no wealth to lavish in marble fountains and statues, and other costly works of art; but we will try and not mar what Nature has rendered so beautiful to our hands. By planting trees, shrubs, and flowering plants of every variety of form and foliage, and each, if possible, perfect in its kind; by propriety of arrangement; by such pleasing structures as our means will enable us to adorn the grounds with; and by rendering all these accessible by roads and walks; we will try to make this plateau a haunt of beauty, and in harmony with the enchanting scenery which surrounds it.

Foreign Notices.

It is to be feared that all round London the hopes of the gardener have been destroyed by a sudden and severe frost on the night of the 24th inst. From the 18th to the 20th the weather was excessively hot for the period of the season, the thermometer indicating 77° in the shade on the 19th; and as high as 95° in the sun on the 21st. A strong gale commenced from north-east on the night of the 22d, and continued on the 23d, on the night of which there was 1° of frost; but the blossoms were safe. On the evening of the 24th there was 1° of frost at 10 P. M.; but during the night the thermometer fell to 18°—or 14° below freezing, notwithstanding the heat arising from the ground. Where this heat was prevented from affecting the thermometer by a radiator, the temperature of the air was as low as 12°.

The frost was what is termed a black frost, of the most pervading description. Apple, Pear, Plum, and Cherry blossoms are everywhere killed. There may be a few from later blossoms, and a few naturally late-blooming Apples, but all the most valuable are completely destroyed. Peaches and Nectarines on a good south wall have suffered, but such of the young fruit as were leaning against the warm wall are supposed to be safe. The shoots of Walnuts are hanging wet, black, and soft, as if par-boiled.

There is no record of the thermometer having been thus low in April, near London, in the present century at least.

Accounts from the surrounding counties are to the same effect. Near Tunbridge Wells, the thermometer fell to 25°, and the most abundant young crop of Apricots, Peaches, and Pears, which had been seen for several years, was entirely destroyed. In Hampshire, near the Andover Road-Station, between 4 and 5 o'clock, the thermometer was 14° below the freezing point. The whole of the blooms on the Cherries, Pears, Plums, and Apples, totally perished; also the young Apricots, which were larger than Damsons, and all the Greengage Plums, as well as Rhubarb, and every Asparagus head which was above ground. Such destruction has never before been seen by our correspondent.

At Sawbridgeworth, although Mr. Rivers observed the thermometer no lower than 25°, all the wall fruit which was not well covered, all the standard Pear, Plum, and Cherry blossoms, and the greater part of the Apples, if not all, utterly perished.

Near Worthing the common Box lost nearly all its *old* leaves; our informant assures us that he found the inside of them a solid plate of ice.

Next week we shall no doubt have abundant confirmation of this sad announcement.—*Gardeners' Chronicle, of April* 29.

Sale of Plants at Ealing Park.—The sale of Mrs. Lawrence's magnificent collection of stove and greenhouse plants commenced on Thursday last, and will be finished to-night. The first day was wet and cold; nevertheless upwards of 50 people attended, consisting of the principal metropolitan nurserymen, several noblemen and gentlemen's gardeners, and one or two gentlemen. Among the latter we noticed, W. Upton, Esq., of Forest Hill, and H. Colyer, Esq., of Dartford. The plants were, for the most part, in good condition, and realized, upon the whole, fair prices. When we were present on Thursday some of the largest of the specimens were brought forward. We observed that the enormous *Epacris grandiflora*, which for many years formed the crown head of the Ealing Park collection at the Chiswick fetes, was bought by Mr. Eyles, for the Crystal Palace Company, for 12*l.* 10*s.*; this fine plant was quite six feet high, and as much through, and covered with bloom. A *Polygala acuminata*, of similar size, and also in flower, was put up,

and fetched 10*l.* 15*s.*; this was purchased by Mr. UPTON, who also became the fortunate possessor of a magnificent *Azalea exquisita*, for which he paid the handsome sum of 17*l.* 17*s.*; this plant was in all respects in excellent condition, and measured about five feet in height and six feet in width. The same buyer likewise purchased a beautiful *Azalea variegata*, four feet by five feet, for which 15*l.* 15*s.* was paid. An extremely good plant of *Azalea Gledstanesi* fetched 10*l.* 10*s.*; this was purchased by —— JOHNSTONE, Esq., of Oak House, Feltham. *Azalea Lawrenceana*, (which did not appear to be different from *Minerva*) fetched the great price of 24*l.* 3*s.*; this was bought by Mr. UPTON; it was certainly a splendidly grown plant, measuring four feet in height and six feet in width. *Azalea Apollo*, five feet by four feet, fetched 8*l.* 10*s.*; and *A. Gledstanesi*, 7*l.* 5*s.* *Azaleas*, altogether, fetched good prices, as did greenhouse plants generally; although some *Heaths*, *Eriostemons*, *Podolobiums*, *Indigofera decora*, and a few other things, sold for prices considerably below their value. Stove plants seemed less in demand than greenhouse plants, and therefore realized less money. Beautiful bushes of *Ixora Javanica*, 4½ feet in height, and 3½ feet in width, only fetched 2*l.* 10*s.*; *Dipladenia crassinoda*, four feet high, and three feet through, 10*s.*; *Allamanda cathartica*, five feet high, and four feet wide, 2*l.* 15*s.*; and other plants of this description, fetched similar prices. The number of lots sold to-day was 161; the principal purchasers, in addition to those already named, were Mr. COLYER, Mr. AMBROSE BASSET, of Stamford Hill; the Earl of Stamford and Warrington; Mr. DODS, gr. to Sir JOHN CATHCART, Bt.; Mr. WALKER, of Acton; Mr. JAMES VEITCH, of Chelsea; and Messrs. FRASER, of Lea-bridge. Yesterday about the same number of buyers assembled, and a similar number of lots were sold, but they did not fetch near such high prices as they did on Thursday. The plants were, however, generally smaller. A *Pimelea spectabilis*, 5 feet in height and 6 feet in width, was bought by Mr. COLYER for 6*l.* 15*s.*; a *Dillwynia*, 2½ feet high, and as much through, was knocked down to Messrs. FRASER for 5*l.* 5*s.*; *Boronia serrulata*, 2 feet in height, and a little more in width, was purchased by Mr. VEITCH for 5*l*, 15*s.*; Mrs. TREADWELL had a *Chorozema Henchmanni*, 3½ feet in height, and 4 feet in width, for 3*l.* 15*s.*; *Erica metuleflora bicolor*, one of the handsomest of the genus, measuring 3½ feet in height, and as much through, was purchased by Mr. TURNER, of Slough, for 2*l.* 10*s.*; *Franciscea latifolia*, two feet high, and as much through, was bought by Dr. DAUBENY, of Oxford, for 17*s.*; the same gentleman also purchased an *Adamia versicolor*, of similar dimensions, for 1*l.* 2*s.*; *Boronia pinnata*, three feet in height, and more in width, was knocked down to Mr. SPEED, of Edmonton, for 2*l.* 12*s.* 6*d.* *Coleonema rubrum*, a beautiful plant, six feet high and as much in diameter, was bought by Mr. EYLES, for the Crystal Palace Company, for 3*l*; other lots fetched from 10*s.* to 4*l.* each.—*Gardeners' Chronicle.*

CLERODENDRON SPLENDENS.—There is hardly a more beautiful or useful plant in cultivation than this Clerodendron; for, under good management, its large clusters of brilliant scarlet blossoms are produced in great profusion, and they last a long time in perfection. Unfortunately it can never be everybody's plant, for it cannot be grown with advantage except where it can be furnished with plenty of heat and moisture during its growing season. Where there is convenience, however, it is well worth attention, and will be found to amply repay any amount of trouble which may be bestowed on it.

It may be readily propagated by cuttings made of short-jointed young shoots, selected in a rather firm state, inserted in sandy, peaty soil, covered with a bell glass, and afforded a brisk bottom heat. It may also be increased by grafting it on any of the stronger growing varieties; but, although this plan was at one time much recommended, it has now, I believe, fallen into disrepute, the plant having been found to do quite as well on its own roots. The young plants should be potted singly in small pots, as soon as they are sufficiently rooted to bear handling, and replaced in bottom heat, in a moist, warm situation. When well established, shift into other pots, two sizes larger, and keep them as near the glass as is convenient, in order to induce the production of strong, short-jointed wood. And during the growing season, continue to afford them a brisk bottom heat of 85° or 90°, with a warm, moist atmosphere, and all the light possible, merely guarding them from the direct rays of the sun on the forenoons of bright, warm days. Do not keep them growing too late in autumn, however; rather endeavor to have the cuttings rooted

early in the season, so as to get strong, well-furnished plants by autumn, when they should be removed to a drier atmosphere, gradually withholding water from the soil, with a view to get the wood well ripened. And I may observe that upon this, and the plant being allowed a period of rest, future success greatly depends; for unless the wood is properly ripened, and the natural season of rest afforded, there will be no possibility of getting them to break strongly or grow vigorously; but if these particulars have been properly attended to, they will grow equally well whether started in June or March, and form splendid plants for blooming in a warm house during winter. If, however, your young plants are intended for blooming in summer, water should be gradually withheld towards the middle of October, and they may be removed to their winter quarters by the middle of November, which may be a corner of the stove, or to any dry situation where the temperature may average from 50° to 55°, and no water should be given to the soil during the resting season. About March turn them out of their pots and shake away as much of the soil as can be done without injuring the stronger roots, and re-pot in not over-large pots, using good fresh turfy loam, rich fibry peat, and leaf soil in about equal proportions, well intermixed with plenty of sharp sand to secure rapid drainage, cutting the shoots well back to strong prominent eyes. After potting, plunge in a sharp bottom heat, and maintain a moist atmosphere by frequent syringing, but carefully avoid overwatering the soil, until the plants fairly start into growth.

The shoots may be loosely trained to stakes until the plants can be shifted into their flowering pots, when light wire trellises may be applied, so as to enable them to be kept neatly and regularly tied. There is no danger of overpotting a plant like this, for with good management, plenty of light, and the command of heat and moisture, it will fill a 20-inch pot, and form an immense specimen in the course of a few months, or it will bloom nicely in a 12-inch pot, forming a handsome moderate sized plant. Therefore, the size of the flowering pots may be regulated by circumstances, the only difference being that the plants will bloom earlier and their beauty will be shorter lived in small pots, and *vice versa*. If a large shift is given, however, be very careful not to give too much water to the soil, until the roots reach the sides of the pot, and when this is the case a liberal supply of clear manure water should be administered. Keep the shoots regularly trained to the trellis, and continue to keep up a brisk bottom heat, with a warm, humid atmosphere, until they are fairly in bloom, when they may be gradually prepared for removal to the show-house; and if this is done carefully, and they are afforded a close corner not exposed to draughts, they will continue to unfold their brilliant flowers for a very long period. By taking care to get the wood well ripened, affording the plants a period of rest, and disrooting, &c., as recommened above, the specimens will last for any number of years.—*Alpha, in Gard. Citron.*

Conoclinium ianthemum.—The fine foliage, excellent habit, and large loose spreading heads of light blue flowers, which terminate every shoot of this plant, make it exceedingly attractive; and its season of blooming, winter and early spring, when blue flowers are scarce, merits for it a place in every collection of plants.

This is an excellent time for commencing its culture, as a good specimen of it may be grown in the course of the summer. When received it should be placed in a close pit or house, keeping it near the glass, and as soon as it has got over the effects of traveling, shift it into a pot two sizes larger than that in which it has been growing. For soil use good rich turfy loam, fibry peat, and well decayed leaf soil in about equal proportions, adding a sufficient quantity of clean sharp sand to ensure perfect drainage, and a small quantity of thoroughly decayed cow manure may also be added with advantage. Be careful to have the ball and soil in a nice moist healthy state when the plant is shifted, and place it in a close moist warm situation, to avoid the necessity of giving much water at the root until free growth shall have commenced. Sprinkle the plant morning and evening with the syringe, and maintain a humid atmosphere; also keep it as near the glass as is convenient, in order to induce a vigorous start. When it is evident that the roots have taken hold of the fresh soil, stop the shoots, and tie them out, so as to induce the lower buds to push, in order to obtain a well-furnished foundation. Continue to afford the plant a humid atmosphere, sprinkling it frequently overhead with a fine-rosed syringe, but regulate

the temperature so as to secure strong close-jointed shoots. If all goes on well, a second shift will be required towards the middle or end of May, and this should not be deferred until the roots get matted, or the plant sustains any check for want of pot room. There will be no danger in giving a large shift now, but beginners will be safer to give only a moderate one, for there is some danger of erring in watering a plant, when it is surrounded by a large body of loose soil, and therefore it is better to give two moderate shifts. Attend to keeping the shoots nicely tied out, in order to admit light and air to the foliage, and to secure a compact sturdy habit of growth.

During summer, the plant, if in vigorous health, may be removed to a cold pit or frame, which can be kept close and moist. But the very best position for securing rapid, strong growth, would be a pit where a bottom-heat of 80° or 85° could be maintained, and where the plant could be kept near the glass, keeping the atmosphere rather cool, and affording it a slight shade for a few hours on the forenoons of very bright days. Here it would grow very rapidly, and a frame and a little fermenting material properly put together might be easily made to afford a gentle bottom-heat for two or three months, and would be useful for many plants besides this. Attend during the growing season to keeping the shoots nicely tied out, stopping them as may be necessary, and also to shifting as may be required. Stopping, however, should not be practiced later in the season than will allow of getting the last growth well ripened before winter; and if the shoots are kept properly tied out, and the plant well managed otherwise, very little stopping will be necessary to secure compact bushy specimens. When damp cloudy weather occurs in autumn, the plant should be removed to a rather dry atmosphere, where the temperature may average about 55°, placing it near the glass, and it should be rather sparingly supplied with water for a few weeks, in order to get the wood well ripened, which will greatly conduce to a fine display of bloom. By removing the plant to a warmer situation, and giving a liberal supply of water at the root, it will soon develop its beauty, and may be placed in the conservatory while in flower. Care must be observed, however, not to place it in the way of cold draughts, and a damp stagnant atmosphere must be guarded against, as this would soon destroy the blossom, and greatly impair the beauty of the plant.

If afforded a close dry situation, the flowers will remain some two months in perfection, and will present a striking and agreeable contrast with those of most winter-blooming plants. After the flowering, the plant may be cut back rather closely, and removed to a cool dry situation for a few weeks, keeping it sparingly supplied with water until it shows indications of growth; when it should be repotted, slightly reducing the old ball, and clearing away a portion of the old exhausted soil. The same treatment as recommended above may be repeated, and will produce an immense specimen in course of the second season. Cuttings selected of firm bits of the young wood, and treated in the ordinary way, will root very freely in bottom heat. But the plant will bear cutting back and disrooting to any extent; so that when once a stock is obtained, there will be little necessity for propagating it.—*Alpha, in Gard. Chronicle.*

The Chrysanthemum.—In the following remarks respecting Chrysanthemums I shall chiefly confine myself to the mode of cultivating them in pots. As soon as the plants have done flowering, I cut them down, and place them in any convenient corner on the south side of a wall, where they are in some measure sheltered from frost and north-easterly winds. They remain in this situation undisturbed, except by watering them now and then, until the present time, when they are removed to a more open place, preparatory to their being wanted for the purpose of propagation. Chrysanthemums may be increased by cuttings, layers, and offsetts; I have often grown them from the latter; but I have found the foliage so apt to go off them, and leave the plants naked at the bottom, that I greatly prefer cuttings, which, with good treatment, will retain their foliage green and healthy almost to the rims of the pots. The best time for putting in cuttings is the latter end of April, or the beginning of May. I use the points of the best shoots of the current year's wood, not more than 2 or 3 inches in length, cutting them close to a joint, and removing the bottom leaves. When potted, I transfer them to a close frame; and if it is convenient, I assist their striking by means of a gentle bottom-heat, but this is not absolutely

necessary, for they strike readily without it. I shade for a few hours in the day-time, until they have taken root, when I give them plenty of air, and pinch out their tops, which causes them to break freely. When the shoots have grown an inch or two in length, I pot into 3-inch pots, in a mixture of turfy loam and one-third rotten dung, selecting the strongest and bushiest plants, and discarding the rest. When potted, I again place them in a close frame, and shade a little until they have made fresh roots. They are afterwards set out of doors, sufficiently far apart to prevent their being drawn, and kept well supplied with water. When the shoots have grown 3 or 4 inches in length, I again pinch out their tops, in order to make them bushy; and after they have grown an inch in length, I shift the plants into 6-inch pots, placing them again in their former situation; and when they have filled the pots well with roots, I re-pot them into 9-inch pots, in which I flower them, using the same compost as before. I now place them thinly in a nice open place, where they have a free circulation of air; this keeps them dwarf and healthy. I keep the pots clear of weeds and suckers; water them as often as they require it; and when they have fairly set their flower-buds, I give them some good clear manure water twice a week, or more or less according to the state of the weather. About the beginning of October, I remove some of the most forward plants under glass, giving them plenty of air through the day. The others are taken in as they are required, or as the weather may render necessary; for though hardy, the Chrysanthemum will not stand more than 4° or 5° of frost, without sustaining some injury. I bloom here every year about 150 plants, varying from one to two feet high, and having from 25 to 30 full blown flowers on each plant, many of which do not require a single stake to support them. It may be worth while to remark that, if some of the most promising shoots of out-door plants are layered in the beginning of September, by giving them a twist, and pegging them down a few inches below the surface of the ground, so as to make young plants about ten inches high, they will be well rooted in three weeks, *i. e.* if they are kept watered. When rooted they may be taken up and potted in 6-inch pots, and placed in a close frame for a few days, while they make fresh roots; afterwards they should have plenty of air. Plants managed in this way are very suitable for the front shelves of the stage, or for mixing with other plants. The earliest and best flowering of the plants I take cuttings from are selected and planted in any vacant places in the shrubberies, all the shoots being first shortened back to within six inches of the pot. This causes them to make more shoots, which are again stopped, thus keeping the plants dwarf and in due bounds, and inducing them to bloom at a season when few flowers adorn the garden. —*T. R., in Gardener's Chronicle.*

Wardian Cases.—*Royal Institution, March* 17.—Dr. Stephen H. Ward delivered a lecture on this occasion, on "Wardian Cases," of which the following is an abridged report. Dr. Ward began by explaining the circumstances which had led his father to adopt air-tight cases for the accommodation of his London window plants. He had placed a chrysalis in a bottle, with a little damp earth, in order to watch its progress towards transformation into a moth; a Fern and a Grass began to vegetate, and, to his surprise, continued to show a healthy appearance, the former on its more perfect development proving one of his favorites, which he had often failed in rearing under ordinary circumstances. On investigating and questioning himself on these appearances, the answers readily presented themselves, inasmuch as all the requirements of nature were contained within the bottle—air, light, and moisture. Many persons had fallen into the error that Ward's cases were, or ought to be, hermetically sealed; on the contrary, a change of air is frequently necessary; this will imperceptibly occur in the closest made cases, or they would inevitably burst. The trough to contain the earth may be made of any materials —earthenware or wood pitched inside; but the best are zinc. Of all, by far the best were stated to be bell-glasses, which are also admirably adapted for cut flowers, which are long preserved in them, as in the case of a Camellia, which, on one occasion, had retained its beauty for nearly a month. To size there are no limits—from an ounce phial even to the Crystal Palace itself. The decay of a healthy plant on transmission to a room in town is effected by the variety of noxious gases, evaporation from dryness of air, frequent and sudden alteration of current and temperature, deposition of dust, soot, &c., the latter especially inimical; all these were pro-

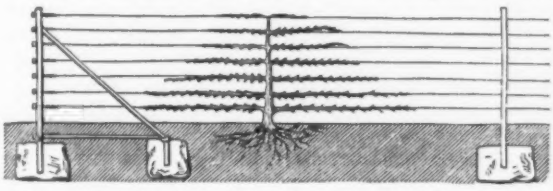
vided against by the glass case, while the moisture which was raised became condensed on the sides of the glass on occasions of change in the external temperature, accumulating and descending to the earth, at the bottom becoming more perfectly aërated, and in a state better adapted for stimulating and nourishing the plant. So complete is the *routine* in such a little world, in itself independent of external circumstances, that the old bottle sealed up 19 years since is green with vegetation, though the deposits of Confervæ on the inner surface materially disfigure its appearance. This bottle has had no fresh moisture since first closed. The advantages, besides those of mere ornament, were stated to be great—to the poor man in hospitals, treatment of the insane, transportations of plants from one country to another, duration of flowering, to all ranks confined in cities and sick rooms, they were stated to be a blessing. At St. Thomas' Hospital a subscription has been set on foot to provide cases, one of which was exhibited, most elegant in form, and in these the patients found a fruitful source of gratification. One of the advantages belonging to cases of this kind was the facility of transmitting plants from one country to another. Mr. FORTUNE has sent to this country 250 specimens, out of which 215 have arrived in health. Mr. WARD successfully forwarded to Sydney a variety of English plants in a case that was five months on the passage; on its arrival there the Primrose was just blossoming; and this case subsequently returned to England with a collection of Australian plants. The carbonization of the atmosphere by animal respiration, and the restoration of oxygen by vegetation, is a well known fact, and upon this Mr. WARD claims the merit of suggestions as to sanitary buildings in which vegetation would form a conspicuous feature. In connexion with the restorative nature of the process of vegetation, a taper was put under a bell-glass containing a Rose and other flowers, and was extinguished in ten minutes. But after exposing the glass to the sun for about three hours, the taper could be again kept alight for the same period as before. In the same manner vegetation in water would be found to restore the oxygen, and in consequence it was possible to keep fish in air-tight cases, when vegetation was allowed to accompany them. To Mr. WARD was due the credit of having first introduced a vivarium into a closely glazed case in 1841, and for having depended for the renovation of the air necessary for the gold and silver fish contained therein upon the purifying action of associated plants, such as *Pontederia crassipes, Pistia stratiotes, Valisneria spiralis.* Mr. BOWERBANK took the hint from Mr. WARD, and established a little vivarium in a large glass jar—stickle-backs, minnows, and fresh water snails, and with plants of Valisneria, and covered the mouth of the jar with glass, so as to make it a closed case. Snails, for the purpose of removing the Confervæ that cover the leaves of Valisneria and other aquatics, were first recommended in a note in the number of the "*Microscopical Journal*," for September, 1841. It was, however, stated that so long ago as 1763, LEDERMÜLLER had published, in his "*Microscopical Recreations*," a figure of an open-mouthed bottle containing fresh-water zoophytes, associated with Duckweed, Chara, and other plants. Mrs. THYNNE first introduced marine vivaria into London; having brought some living Madrepores up to town in 1846, from Torquay, she placed them in two glass tanks, and at first effected aëration of the water by having it daily taken out and poured in gradually from a height, occasionally sending for fresh sea-water and thoroughly renewing it; after a year or two her Madrepores seemed to flag, and then she procured some pieces of rock and shell with living sea-weeds attached, and subsequently depended upon the counterbalancing action of these. Dr. WARD decidedly entertains sanguine hopes that success will ultimately attend the adaptation of the principles in extension to the maintenance or restoration of health to the human frame, although he admits that difficulties would present themselves in the attempt to realize such adaptation.—*Gardeners' Chronicle.*

MANETTI ROSE STOCK.—I have cultivated this stock these 10 years on a portion of my nursery ground, consisting of about three acres of light poor soil resting on a subsoil of gravel. The better part of it is light sandy loam; I find the Manetti to suit me much better than the Dog Rose for dwarf plants; nearly all the Hybrid Perpetuals and Bourbons take freely upon it, and make fine heads. Some specimen plants have stood seven or eight years, and are now full of health, while, if they had been worked on the Dog Rose, or upon their own roots, they would

not have remained healthy above two or three years, having nothing to feed upon but light dry soil. Rose growers, who are fortunately situated on a rich soapy loam, or on a deep loam, or who possess a deep vegetable soil with a cool moist bottom, doubtless find the Dog Rose suit them best. And these are the cultivators whom I have generally heard condemn the Manetti stock. I believe, however, that in most other soils and situations the Manetti is preferable, and it will be highly prized by those who have to contend with light, dry, or poor soils, on which this stock will flourish, when the Dog Rose would scarcely live. A few Roses will not grow well upon it, such as Cloth of Gold, Solfaterre Ophirie, &c.; but as a set-off, it will be found that Robin Hood, Madame Aimée, Hypocrate, Œillet parfait, Superb Shaped, Unique, &c., grow much more robust on it than they do on the Dog Rose, and they produce finer flowers.— *R. B. Bircham Hedenham Rosery, Bungay, Suffolk, in Gardener's Chronicle.*

Flower Stands for Greenhouses, &c.—In small greenhouses, particularly those attached to or near the proprietor's house, where elegance of design and neatness in keeping are attended to, we see not why stages of the ordinary clumsy description should not be entirely dispensed with, and the plants set in elegant vases or flower-stands, having the surface of the pots covered with clean green moss. The subjoined cut represents a flower-stand suited to this purpose, and much used in France. They are of cast-iron or bronze, and not only are the plants tastefully arranged in them, but often little jets are introduced, as shown in our cut. Wherever such an arrangement is intended, we would suggest to have all the tables portable, so that the arrangement may be altered at pleasure.—*M'Intosh's Book of the Garden.*

Espalier Railing.—The accompanying cut exhibits a specimen of a cheap, durable, and elegant espalier railing, consisting of wrought-iron uprights 1¼ inches square, and six feet in height. They are set into large blocks of unhewn stone, sunk in the ground so as not to be seen. The horizontal wires are nearly a quarter of an inch in diamater; and after being very firmly secured at one end, are made to pass through the uprights at about 6 or 7 inches apart from each other. They are then tightened up with a nut and screw at the other end.—*Ibid.*



Editor's Table.

Our Frontispiece.—We present this month a plate of eight well-proved excellent varieties of Cherries. We cannot say that we are partial to this mode of illustration—one or two varieties, with foliage, would make a much finer picture; but by giving portraits of eight varieties at once, we furnish a greater amount of information; and this, with us, is the main point. To a large number of the readers of the *Horticulturist*, these varieties are well known, while on the other hand, many who have more recently engaged in fruit culture, know but little about them. At any rate, we feel that we cannot do wrong in making still more widely and favorably known varieties of such sterling merit.

No. 1. *Elton*—This is one of Knight's English varieties, said to have been a cross between the *White Heart and Yellow Spanish*. Fruit large, heart-shaped, long, or pointed pale yellowish-white, nearly covered with light red. Flesh half tender, juicy, and delicious Tree a strong grower, spreading, and somewhat irregular, with large leaves, distinguished by reddish petioles, or leaf-stalks. It may be placed among the early varieties.

No. 2. *Yellow Spanish*, called, also, *Bigarreau* and *Graffion*—A very old variety, supposed to be of Turkish origin, of unsurpassed excellence, succeeding well in many parts of the country. Fruit large, obtuse heart-shaped, yellow, or cream color, with a bright red cheek. Flesh firm, juicy, and excellent. Tree vigorous, and an abundant bearer, generally, forming a handsome, round, regular head. Mid-season.

No. 3. *Knight's Early Black*—One of Knight's English varieties, said to be a cross between the *May Duke* and *Yellow Spanish*. Fruit medium to large size, obtuse heart-shaped, with a stout, short stalk. Skin quite black when ripe. Flesh tender, juicy and rich. Tree of medium size, spreading, forms a handsome, regular, round head. Early.

No. 4. *Napoleon Bigarreau*—A very large and beautiful French, or Dutch variety, resembling the *Yellow Spanish*, but larger and more oblong; not first quality, except when ripened in fine, dry weather. Tree vigorous, erect, and regular in growth, with large, heavy leaves, and a prodigious bearer, will produce almost twice as many as the *Yellow Spanish*. Rather late, succeeding the *Black Tartarian*.

No. 5. *Reine Hortense*—A large and beautiful French variety, belonging to the *Duke* class; somewhat oblong, bright red, tender, slightly acid, but rich and delicious. Tree an erect, regular and handsome grower, makes a beautiful pyramid or small standard on the Mahaleb stock for gardens. Ripens late, and hangs long on the tree. A moderate bearer when young, increasing in fruitfulness with age.

No. 6. *Burr's Seedling*—Originated by Mr. Zera Burr, of Perinton, near Rochester, some eight or ten years ago. A large, handsome variety, somewhat like the *Elton*, but not so pointed, nor scarcely so large, generally. Tree remarkable for its erect and handsome growth, and for growing very late in the season, so late that the tops of the shoots are often winter killed, which is an objection to it in very cold latitudes. Rather early.

No. 7. *Downer's Late Red*—Originated by Samuel Downer, Esq., of Dorchester, near Boston. Fruit large, roundish, light red, slightly mottled with amber, in the shade, tender,

juicy and sweet. Tree an erect, rapid, and handsome grower, and produces abundant crops of fruit, which are borne in large clusters, and hang long on the tree. Rather late. Season at Rochester about middle to end of July.

No. 8. *Black Eagle*—One of KNIGHT'S English varieties, like the *Knight's Early Black*, a cross between the *Yellow Spanish* and *May Duke*. In form and color it resembles the *Knight's English Black*, but has a longer and more slender stalk. Fruit large, high flavored, and excellent. One of the best, if not *the* best black among the old well proved varieties in cultivation. Tree vigorous and hardy, forming a handsome, regular, round head.

HINTS FOR THE SEASON.—Owing to the backwardness of the spring, kitchen garden crops will be later than usual in many parts of the country; the first sowing, both in frames and in the open ground, were lost through sudden changes and protracted periods of severely cold weather in March and April. In this part of the country we had no good growing weather till about the 5th or 6th of May. Much may be done to make up for this, by selecting such varieties of vegetables as come most quickly to maturity, and by encouraging their growth with extra care and cultivation, a constant use of the hoe, and frequent application of liquid manure, should the weather be dry. It should be borne in mind that a constant supply of vegetables, of the best quality, cannot be kept up without good management in regard to successive sowings. This is especially the case with Radishes, Peas, and String Beans, which are only fit for use in a young state, and for a short time. Lettuce is another thing of which a continual supply of young plants should be kept up by every one who wishes a good salad for the table every day. Too little attention is given to the culture of vegetables for soup. Our American housewives give too much attention to cake and confectionery, and far too little to soups. No dinner table in this country should be without its soup. The kitchen garden should send into the cook a regular daily supply of small Carrots, Turnips, Leeks or Onions, Parsley, with a little of such flavoring herbs as Thyme, Sweet Marjoram, Summer Savory, Mint, &c. We wish that some of those good ladies who are devoting their time to public affairs, would turn their attention towards revolutionizing our system of cookery. The preparation of food is a science, if women would so regard it; few of them, however, give it the least attention. They can boil or bake a Potatoe, roast a joint of meat, and make two or three sorts of pies or puddings; and there is an end of it. Our miserable system of cookery is a cause leading to a rapid deterioration of the race.

THE FLOWER GARDEN.—*Bedding out Plants.*—In many parts of the country it is not safe to trust bedding plants from houses or frames, to the open garden, before the first of June. We prefer waiting until the weather is settled, the ground well warmed, and all danger of frost over. Then get well-established plants, bed out thickly, water overhead freely in the evenings, and the ground will soon be covered; thinly planted beds look meagre. Among the plants adapted to our summer climate, the *Verbena*, *Petunia*, *Scarlet Pelargonium*, *Heliotrope*, *Salvia*, and *Lantana*, are prominent. The *Cuphea platycentra*, *Argeratum cœlestinum*, *Bouvardia triphylla*, and *Veronica Lindleyana*, are also excellent plants for this purpose. Select pure and brilliant colors, and arrange the masses of each so as to produce the greatest effect. A great variety of plants is not so essential to the formation of glowing masses of flowers as an abundant supply of the best sorts.

Dahlias.—Plant the first and second week of this month, (we seldom plant our principal stock till the latter end); strong, well-established pot-plants, raised from cuttings, are bet-

ter than old roots, for a fine show of perfect flowers. Give them plenty of room—at least four feet every way. Turn out of the pots without disturbing the roots, and set a neat stake with the plant, to which it can be secured as growth proceeds.

The following are a few of the finest new varieties; most of them we have proved, and can vouch for their being first-rate:

Agnes, (Edwards,) pure white.
Aurora, orange buff.
Bob, (Drummond,) vivid orange-scarlet.
Grand Duke, (Turner,) bluish-lilac.
George Villiers, (Union,) dark purple.
Miss Caroline, (Brittle,) white, slightly tipped with purple.
Morning Star, (Turner,) orange-scarlet.
Plantagenet, (Turner,) purple, shaded with lilac.
Sir John Franklin, (Turner,) buff, with salmon at the base of the petals.
Sir R. Whittington, (Drummond,) ruby crimson; a large, perfectly formed, superb flower.

Fancy varieties (so called), striped and tipped:

Beauty of the Grove, (Burgess,) salmon buff, tipped with purple.
Claudia, (Lochner,) violet-purple, tipped with white.
Douglass Jerrold, (Keyne,) buff, edged with scarlet.
Duchess of Kent, (Knight,) pale yellow, tipped with white.
Queen Victoria, (Wheeler,) yellow, distinctly margined with red.
Unanimity, (Edwards,) scarlet, and deep yellow in regular stripes.

A Seedling Apple.—R. B. Warren, Esq, of Alabama, Gen. Co.. N. Y., very kindly sent us a box of handsome Russet Apples, about the size of our *Golden Russet*, (described in some of the books "*English Golden Russet*,") but more of a grey color, like the *Pomme Gris*. It is very regularly formed and fair, but although of good quality does not equal the *Golden Russet* in richness. It keeps well, and from what Mr. Warren says of its productiveness, it is undoubtedly worthy of cultivation. Mr. W. says:—"The tree bears a large crop every year; (this year seven barrels). The Fruit is good sized, fair and smooth. The samples sent, are, perhaps, rather above the average size. They keep well till June. The tree is about twenty years old, and there can be no doubt of its being a seedling."

The New York Horticultural Society, like the Crystal Palace, has been thoroughly resuscitated by Mr. Barnum, and people are crying out that Barnum's name will give success to any thing. This, however, is a great mistake. If Barnum would sit down and fold his arms, and merely wish for success, or beg assistance, his name would very soon lose its prestige. This talk about men's *names* doing this or that, is perfectly childish. Success, in everything, depends upon well laid plans carried out with boldness and energy. Barnum's programme for the re-opening of the Crystal Palace shows that he depends upon his name for nothing. Societies and Institutions that are sighing for a Barnum to animate their lifeless bodies, would do well to observe his management.

We learn from the English papers that Mrs. Lawrence, of Ealing Park, has disposed of her magnificent collection of plants, in consequence of delicate health. She had no less than twenty-three glass houses, and her plants have, for many years, been the finest in all England.

Mr. Mathews' remedy for the Curculio has been communicated to Messrs. Chas. Downing, of Newburgh; C. P. Williams, of Albnny; and J. J. Thomas, of Macedon; who are to constitute a committee to put its efficacy to the test. We may expect a reliable report, but we presume it will require several years to experiment. Mr. Fahnestock objected to the large committee previously appointed by our State Society.

To Correspondents.—Correspondents will oblige us by bearing in mind, that all letters on business should be addressed to the Publisher *only* in order to secure attention; and all communications, inquiries, &c., for the Editor, should be addressed to him. The observance of this, will relieve all parties from many little needless annoyances.

Criticisms on Horticulturist.—In the April *Horticulturist* I notice some of your correspondents think you are ruining the work with Pears, Peaches, &c., &c. Now, having the *Horticulturist* from the commencement, and speaking for myself individually, I would beg leave to differ entirely from such a statement.

However much I may have admired Mr. Downing, and there are but few men that more cordially endorsed him in his Horticultural views than myself, yet, since the commencement of the *Horticulturist* there has been no single feature that I more heartily endorsed than your articles and illustrations on Pears, and I most sincerely hope you will not abandon this feature, without good and sufficient reasons, and a stronger sentiment from correspondents than you have yet noticed.

The portion of illustrations relating to flowers, do not, I am free to confess, interest me much, but I doubt not there are thousands of your subscribers who do feel an interest, and as deep an interest, too, in that department, as your correspondents do in any thing they may fancy.

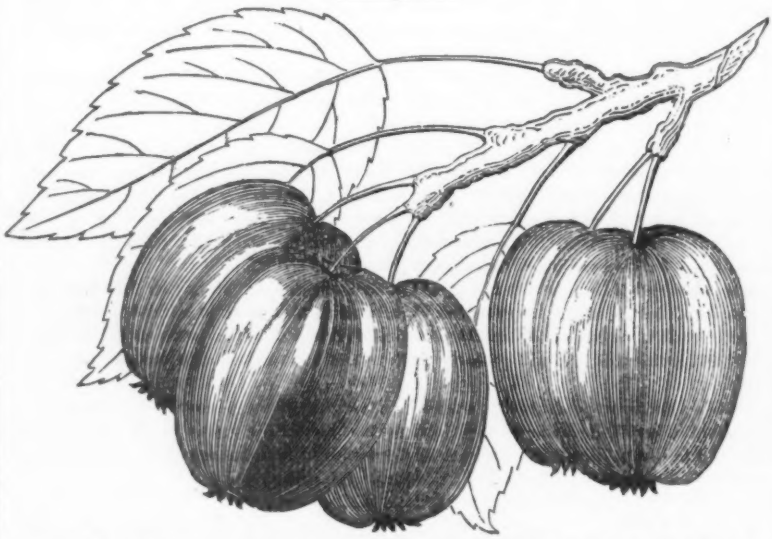
In regard to the pruning of the Peach: I had given much attention to that subject, having *Downing's Fruit and Fruit Trees, Barry's Fruit Garden*, and the *Horticulturist*, and was really green enough to believe that I had about mastered the subject, before you commenced publishing the article complained of, which, although not strictly applicable to this country in every particular, yet it is enough so that a man of the most ordinary comprehension cannot fail to profit by reading, if he has a single tree to train and prune.

As a case in point, I would state to you that at the commencement of the year 1853 there were two copies of the January number sent me. The extra number I sent to a friend of mine, who had given some attention to fruit, and he was so well pleased with the feature on Pears that he subscribed for the work, and will probably continue to take it so long as it occupies its present position.

What do your correspondents recommend in place of those magazine-splitting subjects complained of? I would much like to know, and perhaps some other reader of the *Horticulturist* would also be glad to learn, so that you could be warned in time, before you had split on some sunken rock without a possible chance of salvation. Boardman.

A Remedy for the Scaly Aphis.—About two years ago I put into a thirty-two gallon cask twenty pounds of sulphur, with about three shovels full of lime, filling up the cask with water, using fully half of the solution at the time, for syringing Roses, &c., that were effected with the mildew; the remainder had stood for three months, and had become very strong, assuming a deep red color. I had at this time a plant of the *Epiphylum speciosum* that was so badly affected with the white scale, that I had taken it out of the house two or three months previous to its undergoing the operation I am about to speak of. I may here remark that this plant was in a worse condition than any living plant I had ever seen. I picked it up one day with a view of burning it, thinking it the best mode of getting rid of the live stock, but as I passed the cask con-

taining the solution I thought I would try the opposite element; so I stirred up the ingredient and dropped the plant in, letting it remain about three hours. During this time the liquid had become clear, and the plant entirely coated with the sediment. I took it out and put it on the stage in the greenhouse, and when it required water, I watered it with this solution in a clear state. In a very short time it began to show signs of returning life; the shrivelled parts began to swell out—the coating it got by its immersion falling off in flakes. I now shifted it into a large pot, still continuing to water it with the sulphur water, until the fresh earth had become thoroughly impregnated with the sulphur. It now grew rapidly, and became as healthy a plant, and the green as beautiful, as I ever saw. This plant is now full of flowers, and has never been affected with the scale since. Having several large Cacti that were affected with the scale, and being too large to put in the cask, I gave them about five or six waterings with the same water, and they soon became perfectly clean. I then watered all the Cacti I had with the same water, whether clean or no. This is now, as I stated before, two years since. I have not used any sulphur water on any of them since that period, and on examination I find they are all clean and healthy. Therefore I have come to this conclusion, that if the soil the Cactus grows in, is impregnated with sulphur, the plant never will become affected with scale, for this reason: the sulphur is taken up by the roots, and is thoroughly disseminated through the plant, at the same time rendering the plant unwholesome to the scale. ROBERT MESTON.—*Ashwood, Tenn*



HAMPTON'S NEW SIBERIAN CRAB.—One of six seedlings from the Siberian Crab, all of which are different.

Size—large for a Siberian. Form—ovate conical. Color—a deep, rich crimson, blotched and indistinctly striped with clear orange and yellowish red. Blossoms—large. The tree presents a splendid appearance when in blossom, and when loaded with its dark, crimson fruit, is highly ornamental; and the fruit is excellent for preserving, being of a sweetish, astringent flavor. Season of maturity—October and November. Raised by WILLIAM C. HAMPTON, of Dudley, Hardin County, Ohio. W. C. H.

Cooper's Market Apple.—The above variety of Apple, it is understood, was introduced here by Mr. Schenck, of Brighton, who brought it from New Jersey. It is a beautiful medium sized Apple, tart, when first in eating, but when fully ripe, quite mild and agreeable, during all the month of May. It is one of the most perfect keepers, and our fruit dealers have found a ready sale for it this season. High colored when grown in the sun, and sometimes beautifully mottled. The tree blossoms later by two weeks than other kinds, except the *Russet* and *Northern Spy*. It is a desirable Apple for *Market*, and very properly named so on that account. J. H. Watts, *Rochester*.

With the above note Mr. Watts was kind enough to hand us some very beautiful specimens of this fruit, as fresh and juicy as we would expect to find them in mid-winter. We have observed them frequently in the baskets of street dealers, late in the spring, competing with the *Northern Spy*. It deserves more attention.

Too Happy at Home!—*To Elsie, Woodside*—So unexpected a prescription for my cure, as you have proposed in the May number of the *Horticulturist*, while it calls for my grateful acknowledgments, requires consideration. An exchange of situations, if it takes place, must be discussed. Will you take, with my perfected place, all its inconveniences? Will you, or your husband, accept the gout, and rid me of it? This, you will say, can hardly be expected. Well, I suppose you would not, if it were possible, desire my bodily ills. But are you prepared to spare time enough from your troup of Olive plants to see after all that it is necessary to do yourself on my premises? The task is not a light one, and that you may be prepared a little for what will be necessary, I will give you a few items to consider of.

The more pressing at this moment is to see after a neighbor who deserves not the name. He turned off the stream of water which fed my fish ponds, last February, to supply his own water-ram. The law, after much expense righted me, and when I had re-stocked my trout preserves, the villain has just poisoned the rivulet: my pets all turned over, last night, perfectly dead. I have to see my attorney in the morning, enter suit, and attend to this most annoying affair for several months. Will you, or your good man, carry on the suit for me while I am improving for you? Is he a lawyer, or has he any fondness for litigation? Let me know that, before I decide.

You say you have a fondness for having every thing in its place. Will you promise not to dry clothes on my new Araucarias, Rhododendrons, and funebral Cypresses, or hang your caps on my choice Rose bushes, while I am delving in your reserved acres of primitive forest? My library! What shall I do without *it*? And will you promise your children shall not ruin my "picture books," or scratch my Florentine tables—my small but recherche collection of statuary? Will you guarantee the Roses of Ariadne and Psyche? Shall the birds which Virginia is feeding have all their plumage perfect when I return? My gardener is a good one, and understands my ways: will you guarantee that he will be here when I get back? And if he leaves you in a pet, or goes on a drunken frolic to spite you, will you see after the fires in the Orchid house, the coldest nights of next winter, every hour or two, if, at the same time, one of your children has the whooping cough or the measles? Does your husband thoroughly understand trimming dwarf fruit trees? And is his temper such as not to spoil my favorite riding-horse? Do you really think he could manage my Irish coachman, and make him keep the gears of several kinds perfectly greased? And if he goes from home a day or two without notice, will you oversee your helpmate so much as that the horses shall be fed, curried, and nicely put to bed? Has he a fondness for currying? I have several famous breeds of dogs who require daily looking after, and to be regularly exercised, and you must see that they do not kill my family of tame grey squirrels; and then there are the lop-eared rabbits, to be daily and nightly protected from dogs and cats. The aviary I will surrender to your care—but will you be sure to close off the water from the fountains just before the first freezing weather? Or when I return shall they be found all *burst*? Is it in your

power to superintend underdraining a few acres I have lately bought, and can you give me the address of the maker of the best tiles? There are many other matters requiring consideration, but as I received the *Horticulturist* late in the month, I must defer naming them till you have a little breathing spell. You have by this time, perhaps, perceived one other cause why staying at home is necessary; there *may be* other reasons than being "too happy:" There is too much to take care of.

Meantime, if you should come eastwardly this summer, ask Mr. BARRY to give you a letter of introduction to ATTICUS.

Answers to Correspondents.

ALLOW me to ask a favor, and answer me under the head of correspondence. I consider myself a novice in the nursery business, and labor under great disadvantages in budding Peaches. I generally suffer a loss of one-half of my newly-budded Peaches in the spring; and Plums also. I have exhausted all my ingenuity, and made no improvements; the buds will appear to be all doing well, pushing out until the leaf makes its appearance, and then great numbers come to a dead stand; after some warm, dry days, they become loose and drop off, the same as winter-killed blossom-buds do. I have *Downing's Fruit and Fruit Trees of America*, *Cole's Fruit Book*, and your *Fruit Garden*, and have been a constant reader of the leading journals of the day, and have never found anything to this purpose; the loss is no small item to me. Please give me what light you can on the subject. (1)

I found my Gooseberries attacked by an insect which destroyed my whole crop; last season the crop fell prematurely from the bushes; upon close examination they appeared to be punctured as with the point of a needle. In the transparent varieties, I could see the windings and courses the young larva had taken, and when full grown, would eat its way out, and make its way into the ground. The size of the worm is about one-fourth of an inch in length, white, somewhat slender, with a head quite black. The insect is new to me, and I feel very much alarmed about my next crop. (2) We annually rejoiced over a lovely crop of Gooseberries; they were always exempt from mildew. The remedy I resorted to, was to shake down all the fruit, which was an easy matter, and drag them into the walks to be trodden upon; but the scorching sun soon finished the cooking process, until life was extinct. Any information you can give me on the above will be thankfully received.

Peaches will be a total failure in our locality the present year; the blossoms are all winter-killed. SAMUEL STONER —*Humberstone, C. W., April* 17, 1854.

(1.) Bud early in the season, and use shoots to bud from on which the leaf-buds are small.

(2.) We have not seen such an insect as you describe. Send us a specimen the coming season, if you can.

You know a person sometimes gets confused, and either commits a blunder, or does nothing at all. It is thus with me, in relation to the application of tan-bark to Strawberry beds.

An intelligent amateur, on the Hudson, in detailing his experiments with the Strawberry, in your instructive *Horticulturist*, says, he applies tan in the *fall*, up to the crown of the plants, (not stating how thick), and in the spring, levels, and makes it equal over the bed, to the depth of three inches. He also recommends mulching with tan, immediately after planting in the spring or summer. Another recommends applying tan in the *fall*; another in the *spring*. One makes use of the term "*fresh tan*"; one "*spent tan*"; and another "*old tan*".

Some six or seven years since, I mulched, in December, after the ground had frozen up, three-fourths of a Strawberry square, with tan that had been about my premises for at least eighteen months, and for three years thereafter there was a marked favorable differnce between the part mulched and the remaining quarter. The tan was spread evenly over the whole surface, to the depth of about three inches.

In the fall of 1850, I had about one-fourth of an acre of fine appearing plants, scarcely one missing, set out the previous spring. This bed I covered with tan just drawn from the tannery. This application was made before the *ground* was *frozen*. The result was, that nearly the whole were dead in the spring; and those having any life, so stunted as to amount to nothing. The varieties were *Hovey's*, *Large Early Scarlet*, and *Willey's*. The soil sandy loam, and stiff loam.

Now I think this result was effected by the tan. Am I right? One of my neighbors, also, attributes the loss of his plants to the same cause.

I have just planted out a few squares of favorite varieties, and am desirous of mulching them, with something. Shall I do it with "tan-bark," "*fresh* tan-bark," or "*old* tan-bark,"—and how deep—and in the fall shall I cover crowns and all—and on the opening of spring is it necessary to remove it from the crowns, or will they push through it?

Will you please, Mr. Editor, give us in the next number of the *Horticulturist*, your views on this subject, and in a

minute and particular manner—not only for my benefit, but the public benefit—especially those who are afraid of tan-bark as a mulch for Strawberries?

It is more convenient to procure tan.-bark that has been used at a white lead manufactory Is there any objection to this?

I propose trying the experiment recommended by Dr. HULL, Mr PARDEE, &c., on a few rows—potash, ammonia &c. May this stimulant be applied directly over the plants and leaves, or carefully poured around them? They do not state.

Is there any objection to spading tan into the soil, after having been used as a mulch, for three or four years? T.

We regret being unable to enlighten our correspondent on the subject of tan, as we have not used it as a mulching for Strawberries, and are not chemist enough to answer from theory. Will some of our readers do us the favor to reply? Many statements concerning it have appeared, but generally given so vaguely as not to be reliable or satisfactory. "T." alludes to this, and not without reason. As to "spading down the tan," we should say, with reference merely to its mechanical effect, that on heavy soil it might be good, but on light porous soils, injurious, except in cases where tan remained so long on the surface as to have been converted into mold.

THE NEW WILLOW.—In answer to your correspondent, "C. W. P.," Newton, Mass., in the May number of the *Horticulturist*, respecting the new Willow, all I can say of it is, that it came originally from Gloucestershire, (England), without a name, and as far as I can ascertain has no name there, and is not described in any book on the subject, and our correspondent in England says, give it a name, for it is more valuable for all purposes, than any Willow with which he is acquainted.

It will be for sale in the fall by Dr. C. W. GRANT, Newburgh, N. Y. He has called it the Beveridge Willow, *Salix Beveridgei*. CHARLES DOWNING.

Horticultural and Agricultural Societies.

MASSACHUSETTS HORTICULTURAL SOCIETY—*Saturday, April 1st*, 1854.—The President (Hon. J. S. CABOTT, of Salem), called the meeting to order. The minutes of the last meeting were read by the Secretary, (Mr. W. C. STRONG).

The President presented a communication from Mr. PARKER, proposing to purchase the estate in School street, owned by the Society. Referred to Executive Committee.

On motion of R. M. COPELAND, of Roxbury, a committee of three was appointed to report upon the practice of scraping ornamental trees. Mr. COPELAND exposed the folly of this practice, now so common, and explained why it was injurious to the tree. He thought that the Society would confer no small benefit on the community, by a warning report.

The motion was opposed by Mr. C. M. HOVEY, and carried. The Chair appointed Messrs. COPELAND, W. S. KING, and A. BOWDITCH to constitute the committee.

W. S. KING called the attention of the Society to a report, widely circulated and generally credited; which, he said, was calculated to injure the character of the Society, if true, and which, if unfounded, should be at once publicly denied. The report was, in effect, that the Fruit committee had, upon at least one occasion, been called together by a person other than the Chairman of the Committee, and without the knowledge of the Chairman; and that at such meeting "a Gold Medal worth $40," had been awarded for a seedling Cherry, to the person who had called the meeting; and that the claims of another seedling, confessedly superior (Mr. WALSH's Seedling) had been ignored; that the award was made by a minority of the Fruit Committee, and that the Chairman was not present at such meeting, nor, until some time subsequent, aware of such award.

Mr. KING stated that he did not vouch for the exact truth of the report, in all its details, but

enough was known to be true to warrant a Committee of Inquiry; therefore moved:—That a Committee of three be appointed, by nomination, to examine into all the circumstances attendant upon the award of a Gold Medal to Mr. C. M. Hovey, for a seedling Cherry; and to report to the Society.

The motion was carried, and Messrs. W. S. King, Samuel Walker (Ex-President), and W. C. Strong, were appointed such Committee.

Brooklyn Horticultural Society.—A friend kindly sends us the following account of the first general Exhibition of this promising young Society:

"I have been to-day, by invitation, as a judge of the "Brooklyn Horticultural Society." This has been their first meeting (except their monthly ones), and so far as I am able to observe, it is the beginning of a new era in this neighbourhood. Their working men seem to go into it with practical experience and matured enthusiasm. They have only been organized about ninety days, and already number over five hundred subscribers. They have got many influential and wealthy gentlemen as supporters, and who seem to be aware of the advantage of leaving the working to those of experience. The result, so far, has surpassed their most sanguine desires, and to-day's display does them credit. The show of plants is more select than numerous, and there are many examples of superior skill in cultivation, particularly in specimen plants, many of which would grace the tables of a British exhibition. Those of Louis Menand, of Albany, are fine, *some of the best Ericas I have seen in this country.* He also showed a noble *Ixora coccinea.* The show of stove and greenhouse plants were in good quality and quantity. The Fuchsias were really fine; the Pelargoniums choice; Calceolarias numerous, and some of them good; Azaleas scanty, and but so-so, (rather too late for them); Roses not numerous; Cut Flowers the same; Boquets and other arrangements of like character choice, but not in great quantities. Mr. Ranch had a good stock, and some things very rare, among which were the gold and silver striped Anactochilus. Mr. Graeff had a very numerous show of Calceolarias, &c., which filled up a large space. Hogg, of Yorkville, had a large table, among which were *Dacrydium cupressinum, Cupressus funebris,* each six feet high, *Ryneospermum jasminoides,* &c. Mr. Cummings also exhibited some good things, but not for competition. Vegetables were scarce, particularly for the neighborhood, and there was one dish of very creditable Grapes. Taken altogether, the thing has been successful and satisfactory, and I understand that you will have, shortly, an official and more detailed account."

Pennsylvania Horticultural Society.—The stated meeting of this Society was held on Tuesday evening, May 16th, 1854. The President in the Chair. The Hall was thrown open at 5 o'clock, P. M., and was graced by the elite of the city. A finer display has not been shown before the Society for many years. Contributions were brought from nearly all the Greenhouses and Conservatories in the vicinity. Premiums were awarded as follows:

By the Committee on Plants and Flowers—*Pelargoniums,* 8 plants, for the best to Robert Buist; *Specimen Pelargonium,* for the best to Robert Buist; *Cinerarias,* 8 plants, for the best to Thomas Richardson, New York, (very fine, and attracted special attention); *Roses,* for the best and the second best to F. Allgier; *Tulips,* cut flowers, for the best to G. W. Earl; *Collections of Plants,* for the best to John Pollock, gardener to James Dundas; for the second best to Robert Buist; for the third best to Thomas Robertson, gardener to B. A. Fahnestock; *Specimen Plants,* for the best to John Pollock; for the second best to James Kent; *New Plants,* shown for the first time, a premium of $4 to Robert Buist for Orchids, Geraniums, and Begonia Zanthina; of $1 to John Pollock for Orchids; *Table de sign,* for the best to Jerome Graff, gardener to C. Cope: *Baskets,* for the best to Jerome Graff; for the second best to Alex. Burnett, gardener to H. Pratt McKean; *Indigenous Flowers,* for the best to Meehan & Saunders; *Boquets,* pair, for the best to Jerome Graff; for the second best to James Kent. *Special Premiums*—$3 to Charles Miller for a collection of plants; $2 to John Pollock for Gloxinias and other plants; $2 to Thos. Richardson, N. Y., for beautiful Calceolarias; $2 to John Sherwood for a collection of Roses.

The Committee called particular attention to a beautiful collection of miscellaneous plants by Wm. Sinton, gardener to Mrs. Dr. Rush, to which they award a premium of $5. They also call special attention to two very fine specimens

of Strelitzia regina, for which they award a special premium of $3 to Isaac Collins, gardener to Gen. Patterson. Attention was called to a good collection of cut flowers, from Mrs. Holbrook, New York, David Scott, gardener.

By the Fruit Committee—special premiums, viz:—To Albinus L. Felton, for a fine collection of Strawberries in pots, with ripe fruit, $3; to Jerome Graff, gardener to C. Cope, for four bunches of black Hamburgh Grapes, $2; for seven fine Lemons, from H. N. Johnson, $1. They also notice a dish of fine Apples from Dr. Hull, of Alton, Ill., deposited by H. N. Johnson.

By the Committee on Vegetables—*Rhubarb*, 12 stalks, for the best to Samuel Cooper; *Asparagus*, 24 stalks, for the best to James M. Tage; for the second best to Jerome Graff. *Vegetables*—Display for the best by a market gardener, to A. L. Felton. And a special premium of $1 to Jerome Graff, for 3 dishes of very fine Tomatoes.

HARTFORD COUNTY HORTICULTURAL SOCIETY.—At the annual meeting of the Hartford County Horticultural Society, the following gentlemen were chosen as officers for the year ensuing, viz:

WILLIAM W. TURNER, *President*. HENRY MYGATT, Farmington; JOHN M. NILES, JOHN S. BUTLER, HENRY W. TERRY, Hartford; CHARLES L. PORTER, East Hartford; NOAH W. STANLEY, New Britain; NORMAN PORTER, Berlin; E. A. HOLCOMB, Granby; SALMON LYMAN, Manchester, *Vice Presidents*. GURDON W. RUSSELL, *Recording Secretary*. THOMAS R. DUTTON, *Corresponding Secretary*. P. D. STILLMAN, *Treasurer*. H. L. BIDWELL, *Auditor*. H. A. Grant, Joseph Winship, George Beach, Jr., John H. Goodwin, H. L. Bidwell, Henry Affleck, Daniel S. Dewey, G. B. Hawley, Geo. Affleck, Charles T. Webster, H. D. Welles, William F. Tuttle, *Standing Committee*.

AMERICAN POMOLOGICAL SOCIETY.—*New York State Committee*:—P. BARRY, Rochester; J. J. THOMAS, Macedon; CHARLES DOWNING, Newburgh; S. B. PARSONS, Flushing; JOHN B. EATON, Buffalo.

The duty of every State Committee, as defined in the by-laws, is "to forward to the general Chairman, one month before every meeting, state pomological reports, to be condensed by him for public action."

NEW YORK STATE AGRICULTURAL SOCIETY—FAIR OF 1854.—The Fair for the present year is to be held in New York city on the 3d, 4th, 5th and 6th of October. By the following proceedings of a meeting held in New York, May 5th, it will be seen that the American Institute, and the New York Horticultural Society are to unite with the State Society, which will, no doubt, make the show, the present year, exceedingly attractive:

"Mr. L. G. MORRIS, from a committee appointed by local committee of New York to confer with the American Institute, in relation to united action in the Agricultural Department at the next Fair—reported, that the committee had performed their duty, and presented the resolutions adopted by the Institute:

"*Resolved*, That, in view of the Fair of the State Society being held in this city during October next, it is inexpedient for the Institute to hold any Agricultural Fair the present year, except as in connection with the State Agricultural Society.

"*Resolved*, That this Institute will hold an Agricultural Fair in connection with the State Agricultural Society.

"On motion of JOHN A. KING,

"*Resolved*, That the Executive Committee concur in the resolutions of the American Institute.

"NEW YORK HORTICULTURAL SOCIETY.—Mr. P. B. MEAD, Secretary of the Society, was present on behalf of the Society, who propose to unite with the State Agricultural Society in the Horticultural Department of the Exhibition. The list of premiums prepared by P. BARRY, Esq., Editor of the *Horticulturist*, Rochester, at the request of the Executive Committee, was considered, and after additions and amendment, was adopted.

"The general Premium List was also taken up and adopted with various additions and amendments to the original report.

"The appointment of Judges was then taken up, and the list having been again considered, the various committees were filled by the Board and the attending Committee of the Institute.

"The Secretary was directed to prepare 3000 copies of the Premium List for distribution, and 1000 copies of a Circular calling the attention of the public to the united Exhibition to be held.

"The President was directed to correspond with the Railroad and Steamboat Companies, in relation to the usual arrangements for the transportation of stock and articles free, and visitors at reduced rates.

"Adjourned to the first Thursday in June.

"*New York, Friday, May 5th.* B. P. JOHNSON, *Cor. Secretary.*"

PUTNAM COUNTY (IND.), AGRICULTURAL SOCIETY.—The fourth annual Fair of the Putnam County (Indiana), Agricultural Society is to be held at Bainbridge, on the 14th and 15th days of September. A fine and well arranged list of premiums are offered. Among the premiums we notice about twenty volumes of the *Horticulturist.* For thus remembering us, our kind friends in Putnam County have our best thanks; it is an example that might well be imitated. The following are the premiums offered on *Vegetables, Fruit,* and *Flowers:*

Vegetables.—Best specimen of Irish Potatoes, Ag. paper. Best do Sweet Potatoes, Ag. paper. Best do Parsnips, Ag. paper. Best do Turnips, Ag. paper. Best do Beets, Ag. paper. Best do Onions, Ag. paper. Best do Cabbage Ag. paper. Best variety Tomato, Ag. paper, Best do Pumpkins or Squash, Ag. paper. Best assortment rare vegetables, Hort. colored plates, $4 00.

Fruit.—Best assortment Fruit, all kinds, Hort. colored plates, $4 00. Best do Apples, Hort. colored plates, $4 00. Second best do do, Hort., $2 00. Best do Pears, Hort. colored plates, $4 00. Best do Grapes, Barry's Fruit Garden. Best six specimens of fall Fruit, Ag. paper.

Flowers.—Best Assortment of Flowers, Hort. colored plates, $4 00. Best do pot Plants, Hort. colored plates, $4 00 Best do Dahlia, Ag. paper. Best do Chrysanthemum, Ag. paper. Best do Verbena, Ag. paper. Best do Geranium, Ag. paper.

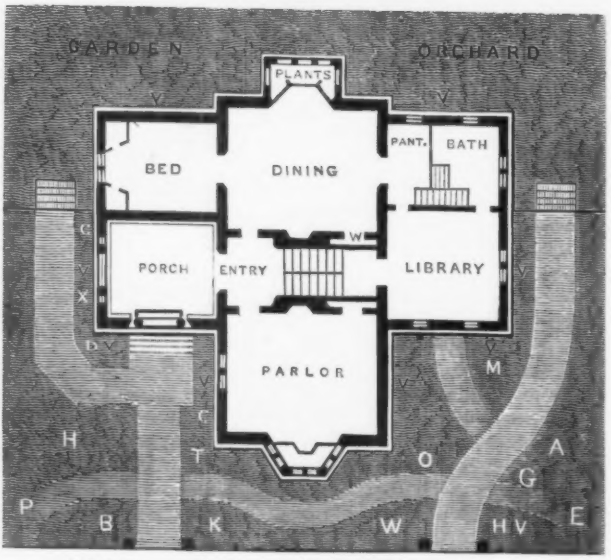
Gardens.—Best adorned yard, Hort. colored plates, $4 00. Best garden, Hort. colored plates, $4 00.

BROCKVILLE HORTICULTURAL SOCIETY.—We are indebted to some friend in Brockville (C. W.) for a nicely printed pamphlet, containing the officers, committees, premium list, &c., for the present year. The premium list is well arranged, and the premiums offered, quite liberal. The first meeting this season, is to be held June 29th, and the summer, or annual exhibition, September 14th, unless the state of the season may render it necessary to change this time, of which, at least ten days' notice will be given. The following are the officers and commitees:

WILLIAM MATTHIE, Esq., *President.* R. P. COLTON, Dr. T. REYNOLDS, *Vice-Presidents.* FRANK M. HOLMES, *Treasurer.* JACOB D. BUELL, *Secretary.* Mr. Sheriff Sherwood, Wm. B. Simpson, James Cameron, George Morton, John Lawrence, Alex. Rodgers, David Wylie, *Directors.*

COMMITTEE OF ARRANGEMENTS.—Mr. SHERIFF SHERWOOD, *Chairman. On Flowers*—Messrs. John Lawrence, Wm. Thompson, and Dr. Reynolds. *On Fruit*—Messrs. G. Morton, J. Cameron, and R. Coleman, Jun. *On Vegetables*—Messrs. Alex. Rodgers, Robt. Watson, and W. B. M'Clean. *On Decorations*—Messrs. F. M. Holmes, W. B. Simpson, and Jas. Crawford. *On Finance*—Messrs. D. Wylie, R. P. Colton, and J. Reynolds.

DICENTRA or DIELYTRA SPECTABILIS.



KIRK COTTAGE, NEWARK NEW JERSEY